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ABSTRACT

The central aspect of Connecticut's agenda for educational equity and excellence is the implementation of statewide mastery testing in mathematics and language arts. The program, designed for grades four, six, and eight, assesses the skill levels of students by measuring their performance on learning objectives they should have mastered in lower grades. Student performance also indicates the effectiveness of remedial assistance programs and regular instruction. This report summarizes the development and implementation of the Grade Four Mastery Test. These four steps in the program are discussed: (1) mastery test development; (2) setting mastery standards by objective; (3) test administration and scoring; and (4) school district test results reporting. Statewide mastery test results are given for Fall 1986. Five charts show the percentage of students who achieved mastery for each test objective. The learning objectives, sample score report, and information about the school districts are presented in 11 appendices. (VM)

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CONNECTICUT EDUCATION EVALUATION AND REMEDIAL ASSISTANCE

GRADE 4 MASTERY TEST RESULTS

SUMMARY AND INTERPRETATIONS 1986-87

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GRADE 4 MASTERY TEST RESULTS

SUMMARY AND INTERPRETATIONS: 1986-87

STATE OF CONNECTICUT DEPARTMENT OF EDUCATION

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FOREWORD

One of my highest priorities and a very central aspect of Connecticut's Challenge: An Agenda for Educational Equity and Excellence is the implementation of the statewide mastery testing program in mathematics and language arts, including listening, reading and writing, for grades 4, 6, and 8. The testing program is designed to assess specific skill levels of students by measuring performance on various learning objectives that students reasonably can be expected to have mastered by the end of grades 3, 5, and 7.

The results of the Connecticut Mastery Test are useful in evaluating:

- o individual student performance in mathematics and language arts;
- o the effectiveness of instructional programs in mathematics and language arts; and
- o the effectiveness of the remedial assistance programs in mathematics and language arts.

The Grade Four Connecticut Mastery Test, given for the second time in the fall of 1986, provides valuable educational information which can be used to improve instruction and the basic skills of Connecticut's students. The test results have helped local districts to re-examine curriculum and to identify students who have not mastered certain skills.

I encourage you to carefully review the mastery test results provided at the student, classroom and district levels. The Department is prepared to assist local school districts in the areas of curriculum and professional development.

Gerald N. Tirozzi
Commissioner of Education

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LEGISLATIVE BACKGROUND

In June 1984, the General Assembly of the State of Connecticut amended Section 10-14 m-r of the Connecticut General Statutes, an act concerning Education Evaluation and Remedial Assistance (EERA). This law provides that:

- By May 1, 1985, each local or regional board of education shall develop and submit for State Board of Education approval, a new plan of educational evaluation and remedial assistance. Each plan is to address the following:
  - the use of student assessment results for instructional improvement;
  - the identification of individual students in need of remedial assistance in language arts/reading, and mathematics;
  - the provision of remedial assistance to students with identified needs; and
  - the evaluation of the effectiveness of the instructional programs in language arts/reading, and mathematics.
- The State Board of Education shall administer an annual statewide mastery test in language arts/reading, and mathematics to all fourth-, sixth-, and eighth-grade students.
- Each student who scores below the statewide remedial standard on one or more parts of the eighth-grade mastery examination or the ninth grade proficiency test shall be retested. Starting in October 1987, these students shall be retested annually, using the eighth-grade mastery test, only in the deficient area(s) until such students score at or above the statewide remedial standard(s).
- Biennially, each local or regional board of education shall submit to the State Board of Education a report which includes indicators of student achievement and instructional improvement.
- On a regularly scheduled basis, the State Board of Education shall complete field assessments of the implementation of local EERA plans.
- On an annual basis, test results and low income data shall be used to determine the distribution of available state funds to support remedial assistance programs.

The purpose of this report is to summarize the development and implementation of the fourth-grade Connecticut Mastery Test. The mastery test assesses how well each student is performing on those skills identified by content experts and practicing educators as important for students entering fourth grade to have mastered.

In the spring of 1984, the Connecticut General Assembly amended the Education Evaluation and Remedial Assistance (EERA) legislation to authorize the creation of mastery tests in the basic skill areas of mathematics and language arts, including listening, reading and writing skills. The tests were to be established for grades 4, 6, and 8.

The goals of the mastery testing program are:

- earlier identification of students needing remedial education;
- testing a more comprehensive range of academic skills;
- setting high expectations and standards for student achievement;
- more useful test achievement information about students, schools and districts;
- improved assessment of suitable equal educational opportunities; and
- continual monitoring of students in grades 4, 6, and 8.

The type of test that best addresses these goals is a criterion-referenced test. Criterion-referenced tests are designed to assess the specific skill levels of students. Such tests usually cover relatively small units of content. Their scores have meaning in terms of what the student knows or can do. Test results are used to identify the areas of strengths and weaknesses of each student.

Test Construction

The development of the fourth-grade criterion-referenced mastery test required the formation of seven statewide advisory committees. These included the Mathematics and Language Arts Committees, the Psychometrics Committee, the Bias Committee, the Mastery Test Implementation Advisory Committee, and two standard-setting committees, one for mathematics and one for language arts. These committees were comprised of representatives from throughout the state. Members were selected for their area of expertise. Approximately 150 Connecticut educators participated on the mastery test committees which met over 80 times over an 18-month period (see Acknowledgements, p. vii).

Beginning in the spring of 1984, content committees in both language arts and mathematics participated in each stage of the test development process, including assisting the State Department of Education in the selection of the Psychological Corporation as its test contractor. First, the content committees reviewed the curriculum materials prevalent throughout the state and the scope of the national tests in use in Connecticut at the respective grade levels. Additional resources included the Connecticut curriculum guides in mathematics and language arts, developed in 1981, as well as the results of recent Connecticut Assessment of Educational Progress (CAEP) assessments in mathematics and language arts. Next, the committees identified sets of preliminary mathematics and language arts objectives which reflected existing curriculum materials and the goals of the mastery testing program. The content committees defined an objective as an operationalized learning outcome that was fairly narrow and clearly defined.

Four criteria were used in identifying the appropriate learning outcomes or test objectives and in selecting specific test items to be included on the Grade 4 Connecticut Mastery Test. To have been considered for use, test objectives and items must have been:

(1) significant and important;
(2) developmentally appropriate;
(3) reasonable for most students to achieve; and
(4) generally representative of what is taught in Connecticut schools.

Once the objectives were identified, item specifications and/or sample items were written. Item specifications are written descriptions of the types and forms of test items that assess an objective. They also prescribe the types of answer choices that can be used with each item.

After the test specifications were written and agreed upon, the test contractor wrote items and response choices for each of the objectives. The items were then reviewed by the content committees. Items which met the criteria of the test specifications and received the approval of the content committees were considered for the pilot test. Before testing, the Bias Committee reviewed each item for potential adverse discrimination of gender, race or ethnicity in the language or format of the question or response choices. After their review was completed, the pilot test forms were constructed. Over 500 customized Connecticut items were included in the October 1984 Grade 4 pilot test in language arts and mathematics.

The Psychometrics Committee provided advice concerning other aspects of the pilot test including the sampling design, statistical bias analysis, the design of item specifications, and pilot test administration procedures. The recommendations proposed by the Psychometrics Committee were reviewed and endorsed by the Mastery Test Implementation Advisory Committee.

Pilot Tests

After the items had been reviewed, twelve test forms (six in mathematics, and six in language arts) were piloted for the Grade 4 test. The purpose of several pilot test forms was to ensure that enough test items were included to construct three comparable test forms from the pilot test results.

Over 6,000 Grade 4 students participated in the October 1984 pilot test. In January 1985, the pilot test results were made available to Connecticut State Department of Education (CSDE) staff. The process of selecting items to construct three comparable test forms began by the Bias Committee examining the pilot test statistics of each item for potential bias. As a result, some items were eliminated from the item pool. From the remaining items, test forms were constructed to be equivalent in content and difficulty at both the objective and total test levels.

Once the items were sorted on this basis, the test contractor prepared three complete forms of the mathematics test and two complete forms of the language arts test. These forms were approved by the content committees. Each form was created to be equal in difficulty and test length. A third language arts test will be constructed after a few additional items are piloted as part of a future test administration. The psychometric procedures used to construct these test forms focus primarily on the use of the one-parameter latent trait model.

Survey

In October 1984, a survey of preliminary Grade 4 mastery test objectives was sent to over 3,000 Connecticut educators. The purpose of the survey was to determine (1) the importance of the proposed mathematics and reading/language arts objectives, and (2) whether the objectives were taught prior to the fall of grade 4. Over a 50% response rate was achieved which included approximately one-third of the respondents representing urban school districts. As a result of the survey, two objectives were not considered to be important learning outcomes before fourth-grade and consequently were eliminated from the fourth-grade language arts test by the Language Arts Committee.

Mastery Test Content

Mathematics. The Mathematics Committee recommended a Grade 4 mathematics test that assessed twenty-five (25) specific objectives in four domains: (1) Conceptual Understanding; (2) Computational Skills; (3) Problem Solving/Applications; and (4) Measurement/Geometry. There are four test items per objective for a total of 100 items on the mathematics test. A detailed list of domains and objectives is given in Appendix A (p. 21).

Language Arts. The Language Arts committee recommended a 103 item Grade 4 language arts test that covers two domains: Reading/Listening, and Writing/Locating Information. The eleven (11) objectives recommended by the Language Arts Committee are presented in Appendix B (p. 23).

The general content of Reading/Listening consisted of narrative, expository, and persuasive passages on a variety of topics measuring a student's ability in: (1) Literal Comprehension; (2) Inferential or Interpretive Comprehension; and (3) Critical or Evaluative Comprehension. Audiotapes were used to assess students' listening comprehension ability in: (1) Literal Comprehension and (2) Inferential and Evaluative Comprehension. The Degrees of Reading Power (DRP) Test was also used to assess reading. The DRP test included eight (8) passages and fifty-six (56) test items and was designed to measure a student's ability to understand nonfiction English prose at different levels of reading ability.

The general content area of **Writing/Locating Information** consisted of three components. First, there was a holistic writing sample where writing skills were directly assessed. Each student was asked to write a composition on a designated topic. Writing was then judged on a student's demonstrated ability to convey information in a coherent and organized fashion. Second, the mechanics of good writing, which was defined as (1) Capitalization and Punctuation, (2) Spelling, Homonyms and Abbreviations, and (3) Agreement, was assessed in a multiple choice format. Third, Locating Information, (Schedules, Maps, Index and Reference, and Dictionary Meaning) measured students' ability to find and use information from the sources listed. A detailed list of objectives and number of items per objective is given in Appendix B. (p. 23)

SETTING MASTERY STANDARDS BY OBJECTIVE

The essence of the Connecticut Mastery Test (CMT) is the establishment of a specific mastery standard that accurately reflects students' knowledge and competency on each objective. The mastery test incorporates appropriate and challenging expectations for Connecticut public school students. The goal of the CMT Program is for each student to achieve mastery of all objectives. The objectives being tested were identified as appropriate and reasonable for students at each of the grades tested. These tests are designed to measure a student's performance against these specific objectives.

The process of establishing the mastery standards by objective used a statistical method that required two decisions to be operationalized. The first decision defined a student who mastered a particular skill as one who had a 95% chance of correctly answering each item within the objective. The second decision was that the specific standard for each objective would identify 99% of the students who mastered the skill. For example, literal reading comprehension is measured by 12 questions. By applying the two decision rules stated above to a binomial distribution table, a student is identified as mastering the skill if he/she gets at least 9 of the 12 items correct.

The mastery standards are as follows:

- In mathematics, for each of the 25 objectives, a student must answer correctly at least 3 out of 4 items.
- In language arts, for the nine multiple choice objectives with varying numbers of items, a student must answer correctly the following number of items:

	# Items Correct for Mastery
WRITING MECHANICS	
(1) Capitalization & Punctuation	9 out of 12
(2) Spelling	7 out of 9
(3) Agreement	11 out of 15
LOCATING INFORMATION	
(4) Schedules, Maps, Table of Contents, Title Page, and Dictionary	8 out of 11
LISTENING COMPREHENSION	
(5) Literal	5 out of 7
(6) Inferential & Evaluative	9 out of 13
READING COMPREHENSION	
(7) Literal	9 out of 12
(8) Inferential	10 out of 14
(9) Evaluative	7 out of 10

No mastery levels were set for the two holistic language arts measures, the Degrees of Reading Power (DRP) test and the Writing Sample, since these measures are not composed of objectives against which mastery could be assessed.

Setting Remedial (Grant) Standards

The Psychometrics Committee also considered alternative ways to set standards for grant and remedial purposes. Section 10-14 m-r of the CT General Statues requires that the Connecticut State Board of Education establish statewide standards for remedial assistance in order to meet two responsibilities:

- to identify and monitor the progress of students in need of remedial assistance in language arts/reading and mathematics as part of the EERA field assessments; and

- to distribute EERA funds based on the number of needy students statewide, as well as for use in the Chapter 2 and Priority School District Grants.

The Psychometrics Committee advised setting the standards by the number of items correct because of important technical considerations in equating test forms. The committee conducted lengthy deliberations over the technical feasibility of establishing standards by the number of objectives passed but felt there were significant obstacles which could not be overcome. Standard-setting committees in mathematics and language arts/reading were convened in March 1985 to determine the grant/remedial standards. The standard-setting committees recommended the following remedial standards:

1. In mathematics, a student who answers fewer than 69 of the 100 items (69%) correctly is required to receive further diagnosis by the local school district and, if necessary, to be provided with remedial assistance.

2. In reading, a student whose Degrees of Reading Power (DRP) unit score is lower than 41 is required to receive further diagnosis and, if necessary, to be provided with remedial assistance.

3. In writing, a student receiving a total holistic score less than 4 is required to receive further diagnosis by the local school district and, if necessary, to be provided with remedial assistance.

The recommendations of the Psychometrics Committee and the Standard-Setting Committees were reviewed by the Mastery Test Implementation Advisory Committee in March 1985. The Mastery Test Implementation Advisory Committee (MTIAC) endorsed the procedures used to establish the remedial standards with the clarification that the remedial standards should be considered broad indicators of student achievement and need. The criterion-referenced test is a valuable diagnostic tool used to help districts identify students in need of remedial assistance, to target State Department of Education resources to those students most in need, and to provide useful information to local school districts for improving their curriculum and instructional programs. The MTIAC felt strongly that the data generated by the State Department of Education should not be used to compare performance among districts.

The mastery and remedial standards were adopted, as recommended, by the State Board of Education on June 23, 1985. For a detailed explanation of the remedial standard-setting process, see Appendix C (p. 25).

TEST ADMINISTRATION AND SCORING

Test sessions were conducted by local school district staff under the supervision of local test coordinators who had been trained by staff of the Department and the Psychological Corporation. A student who took all subtests participated in approximately six and one-half hours of testing.

The Grade 4 Mastery Test schedule allowed for three weeks of testing (including make-ups). This allowed local districts as much latitude as possible in adapting test administration to local conditions, in meeting students' needs, and in accommodating religious holidays that occur during testing. Local plans for administration of the Grade 4 Mastery Test were acceptable if the following guidelines were met for all students:

Testing Guidelines: Grade 4 Connecticut Mastery Test

a) The writing sample MUST occur on Tuesday, September 23, 1986.
b) Other testing must occur sometime between September 22 and October 3, 1986, with make-up testing during the week of October 6-10.
c) All fourth graders in a district must be tested on the same schedule.
d) Testing must occur during the regular school day in a regular classroom setting.
e) No more than two (2) testing sessions may be administered in one day with at least a half-hour break between testing sessions (e.g., two a.m. sessions or one a.m. session and one p.m. session).
f) Make-up sessions MUST conclude by Friday, October 10, 1986. Conditions "d" and "e" above must also hold for all make-up sessions.

The Grade 4 Connecticut Mastery Test had seven testing sessions.

- Mathematics I (60 minutes)
- Mathematics II (60 minutes)
- Writing sample (45 minutes)
- Degrees of Reading Power (55 minutes)
- Reading comprehension (60 minutes)
- Listening comprehension (45 minutes)
- Writing mechanics/locating information (60 minutes)

At the conclusion of the make-up testing period, answer booklets were returned to National Computer Systems (NCS) of Iowa City, Iowa for optical scanning and scoring, then, organized in preparation for holistic scoring workshops.

Scoring of the Language Arts and Mathematics Test

The mathematics and language arts multiple-choice tests were machine-scored by NCS. Mathematics scores were reported for the total test as well as for mastery by each objective. Likewise, language arts scores were reported for the total test as well as for mastery of each objective.

Scoring of the Writing Sample

The writing sample was scored by Connecticut elementary teachers using a technique known as the holistic scoring method. Holistic scoring is an impressionistic and quick scoring process that rates written products on the basis of their overall quality. It relies upon the scorers' trained understanding of the general features that determine distinct levels of achievement on a scale appropriate to the group of writing pieces being evaluated.

The major assumption upon which holistic scoring is based is that the quality of a piece of writing should be judged on its overall success as a whole presentation, rather than on the quality of its component parts. Contributing to the rationale underlying holistic scoring is evidence that: (1) no aspect of writing skill can really be judged independently; (2) teachers can recognize and agree upon good writing when they see it regardless of how they describe writing ability; and (3) teachers will rate pieces of writing in much the same way regardless of any discrepant views they might hold about how particular components of writing should be weighed.

The procedure for holistic scoring is specific to the complete set of writing samples on a given topic that a group of scorers have been asked to evaluate. That is, the scoring scale is based on the range of ability reflected in the particular set of writing samples being assessed.

Preparation for scoring. Prior to the training/scoring sessions, a committee consisting of Connecticut State Department of Education (CSDE) consultants, representatives of the language arts committee and other language arts specialists, two Chief Readers and project staff from Measurement Inc. of Durham, North Carolina, met and read a substantial number of essays drawn from the total pool of essays to be scored. Approximately 60 essays were selected to serve as "range-finders" or "marker papers," representing the range of achievement demonstrated in the total set of papers. Copies of those range-finders served as training papers during the scoring workshops which followed. Each range-finder paper was assigned a score according to a four-point scale, where 1 represents a poor paper and 4 represents a superior paper.

Scoring workshops. During the month of November, eight holistic scoring workshops were held in two different locations in the state. Attendance at the grade four scoring workshops totaled 254 teachers. A Chief Reader and two assistants were present at every workshop in addition to representatives of the CSDE. Each workshop consisted of a training session and a scoring session.

The general procedure for a training session is described below.

- Each training paper (range-finder) was studied in turn and trial-scored by all scorers. Scoring judgments were independent, quick, immediate, and were based on the scorer's overall impression of the paper. No fractional points on the score scale (1-4) were permissible.

- After all scorers had scored the first four training papers, their judgments were compared to the score assigned during the range-finding process. Any discrepancies were discussed. Through repeated discussions on succeeding training papers, scorers came to identify and internalize those features of written composition that distinguish the papers along the established range. This "holistic" process obviates the need to articulate explicitly the specific criteria that separate one score point from the next.

- Scorers were "calibrated" by ascertaining that they were making judgments consistent with one another and with the Chief Reader. Discussions about papers continued until agreement was reached on the scores of the training papers.

Once scorers were calibrated, actual scoring of the writing exercises occurred. Each paper was read independently by two different scorers; that is, the second reader did not see the score assigned by the first reader. The Chief Reader was responsible for adjudicating any disagreement of more than one point between the judgments of the two scorers as well as any score in combination with a zero score. In other words, discrepancies of one point between scores (e.g., 4 and 3, 1 and 2, 2 and 3) were acceptable, but larger discrepancies (e.g., 2 and 4, 3 and 1, 1 and 4) had to be resolved by the Chief Reader. Once a paper was assigned two non-discrepant scores, the two scores would be summed to produce the final score for each student. The possible scale of summed scores ranged from a low of 2 to a high of 8.

Understanding the holistic scores. Examples of actual student papers which are representative of the scoring range will assist the reader in understanding the statewide standard set for writing and interpreting the test results. Sample papers representing four different holistic scores are presented in Appendix D (p. 31). Note that the process of summing the scores assigned by the two readers expands the scoring scale to account for "borderline" papers. A paper which receives a 4 from both scorers (for a total score of 8) is likely to be better than a paper to which one reader assigns a 4 and another reader assigns a 3 (for a total score of 7). In addition, it should be emphasized that each of the score points represents a range of student papers--some 4 papers are better than others.

A score of zero (0) was assigned to student papers in certain cases. A score of 0 indicates that a paper is not scorable and, therefore, that the student's writing skills remain to be assessed. The cases in which a score of 0 was assigned were as follows:

- responses merely repeated the assignment;
- illegible responses;
- blank responses;
- responses in languages other than English;
- responses that failed to address the assigned topic in any way; and
- responses that were too brief to score accurately, but which demonstrated no signs of serious writing problems (for example, a response by a student who wrote the essay first on scratch paper and who failed to get very much of it recopied).

Both readers had to agree that a paper deserved a zero before this score was assigned. If the two readers disagreed, the Chief Reader arbitrated the discrepancy. Papers which were assigned a score of zero were not included in summary reports of test results.

Analytic Scoring

All papers receiving holistic scores below the remedial standard also received analytic scoring in five categories (traits): focus, organization, support/ elaboration, mechanics and sentence formation. Analytic scoring is a thorough, trait-by-trait analysis of those components of a writing sample that are considered important to any piece of writing in any context. This scoring procedure can provide a comprehensive picture of a student's writing performance if enough traits are analyzed. It can identify those traits that make a piece of writing effective or ineffective. However, the traits need to be explicit and well defined so that the raters understand and agree upon the basis for making judgments about the writing sample. The analytic rating guide and sample marker papers for the analytic scoring are presented in Appendix E (p. 41).

Scoring of the Degrees of Reading Power (DRP) Test

The scores reported are in DRP unit scores. These scores identify the difficulty or readability level of prose that a student can read with comprehension. This makes it possible to match the difficulty of written materials with student ability. These scores can be better interpreted by referring to the readability levels of some general reading materials as shown below:

- Elementary textbooks (grades 3-5) - 35-58 DRP Units
- Fiction Section - child magazines - 48 DRP Units

A much more extensive list of reading materials is contained and rated in the booklet Readability Report, Seventh Edition, published by The College Board.

The conversion between DRP unit scores and raw scores can be made from the tabled values in The College Board's Degrees of Reading Power Form PB Series Conversion Tables, effective March, 1985.

SCHOOL DISTRICT TEST RESULTS REPORTING

The CMT school district reports are designed to provide useful and comprehensive test achievement information about students, schools and districts. Four standard test reports are generated to assist teachers, principals, superintendents and parents to understand and use criterion-referenced test results. Appendix F (p. 51) presents samples of the school district and parent/student diagnostic score reports.

The Grade Four Connecticut Mastery Test provides a comprehensive report card on how students perform on specific skills that Connecticut educators feel are important at the beginning of fourth grade. The mastery test is instructionally useful since it identifies areas of weakness, as well as areas of strength.

Mathematics

In mathematics, fourth graders mastered an average of 20.1 objectives of the 25 tested, or 80.4 percent. The state's goal is that all students master every objective, or 100 percent. Chart 1 (p. 13) illustrates that, statewide, students demonstrated strong scores in the areas of basic facts and simple applications (such as addition/subtraction to 18; addition/subtraction without regrouping; and determining 1 and 10 more/less than a given number); rewriting numbers using expanded notation; telling time; determining the value of a set of coins; identifying shapes, angles and sides; reading and interpreting graphs; and identifying numbers sentences from problems. However, students did not perform as well on identifying number sentences from pictures; estimating sums and difference; and rewriting numbers by regrouping.

A total of 72 percent of the students mastered 19 or more objectives on the mathematics test, and 12 percent mastered all 25 objectives (see Appendix G, p. 63).

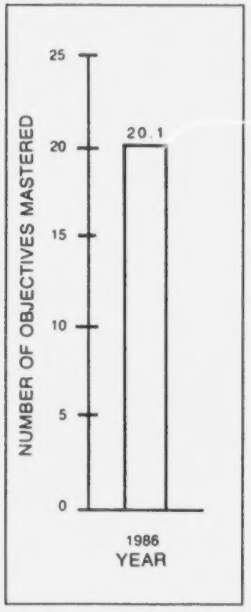
Students getting fewer than 69 questions correct on the 100-question mathematics section (16%) were identified as needing further diagnosis and possible remedial instruction.

Language Arts

In language arts, fourth grade students averaged 6.1 objectives of the nine tested, or 67.8 percent. The state's goal is that all students master every objective, or 100 percent. Chart 2 (p. 14) illustrates that while students did reasonably well on writing mechanics (such as capitalization and punctuation; and agreement) and on locating information, weaknesses were found in higher order inferential and evaluative reading comprehension and literal and inferential/evaluative listening comprehension. A total of 65 percent of the students mastered six or more objectives on the language arts test, which includes writing and reading skills, and 22 percent of the students mastered all nine objectives (see Appendix G, p. 63).

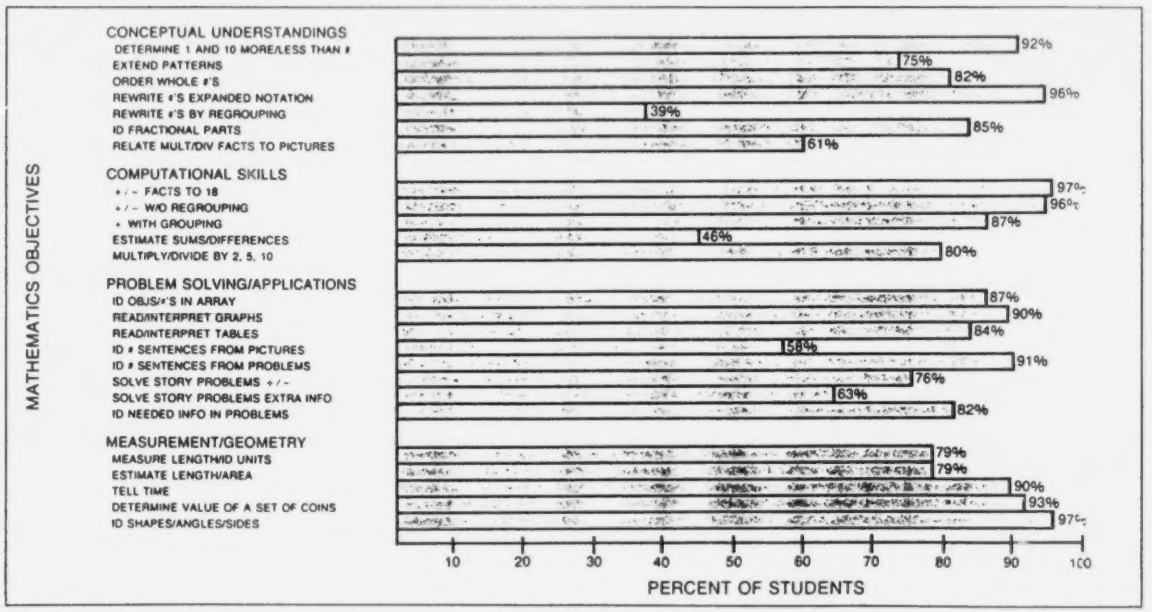
Chart 1
Mathematics: Percent of Students
Achieving Mastery For Each Objective

MATHEMATICS:
AVERAGE NUMBER OF
OBJECTIVES MASTERED



This bar chart illustrates the average number of mathematics objectives mastered, statewide.

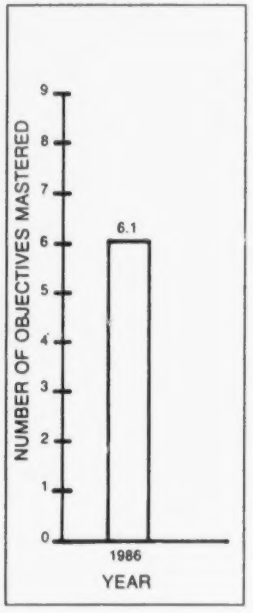
MATHEMATICS: PERCENT OF STUDENTS ACHIEVING MASTERY FOR EACH OBJECTIVE



This bar chart illustrates the percent of students, statewide, who mastered each of the 25 mathematics objectives.

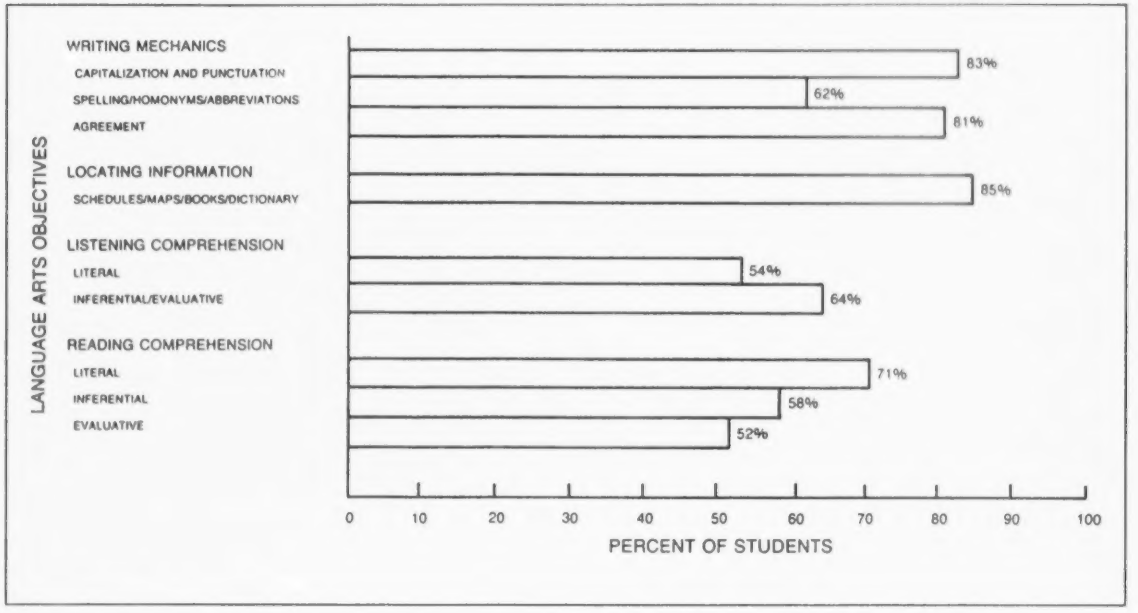
Chart 2
Language Arts: Percent of Students Achieving Mastery For Each Objective

LANGUAGE ARTS:
AVERAGE NUMBER OF
OBJECTIVES MASTERED



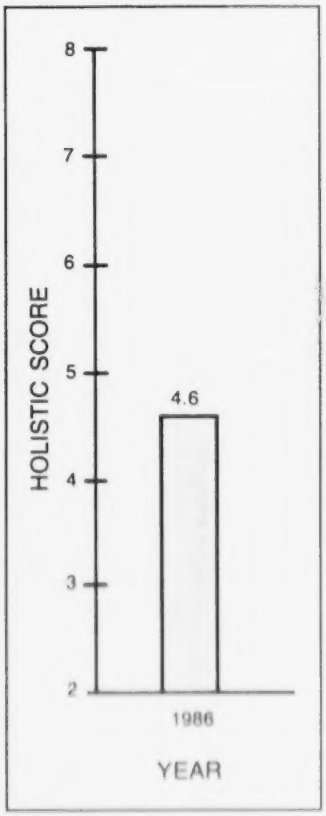
This bar chart illustrates the average number of *language arts objectives* mastered, statewide.

LANGUAGE ARTS: PERCENT OF STUDENTS ACHIEVING MASTERY FOR EACH OBJECTIVE



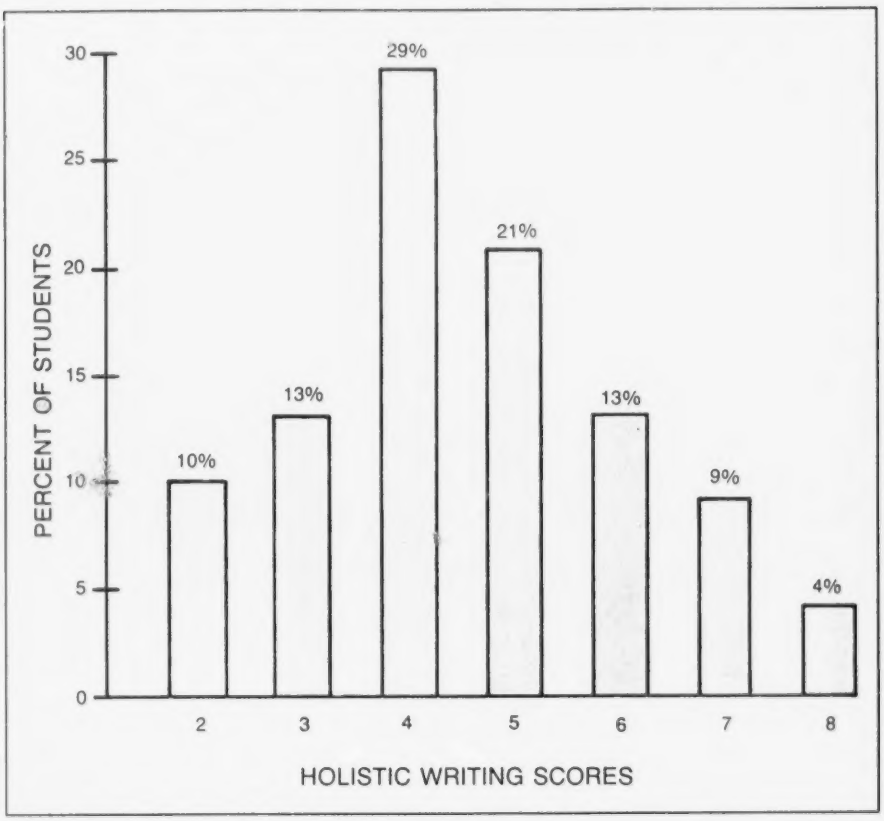
This bar chart illustrates the percent of students, statewide, who mastered each of the *nine language arts objectives*.

WRITING SAMPLE:
AVERAGE HOLISTIC SCORE



This bar chart illustrates the average *holistic writing score* of students, statewide.

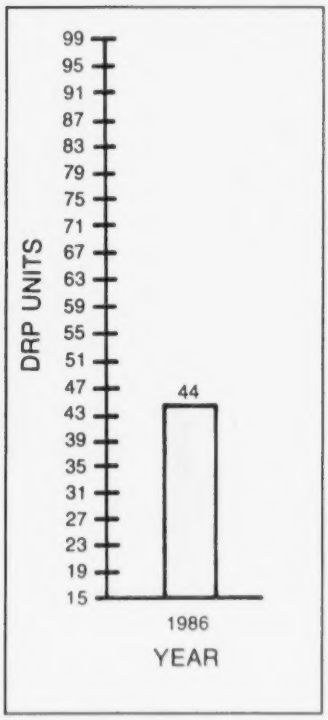
WRITING SAMPLE:
PERCENT OF STUDENTS AT EACH SCORE POINT



This bar chart illustrates the distribution of students who received each *holistic writing score*, statewide. Holistic writing scores are interpreted as follows: a student who scores 7 or 8 has produced a paper which is well written with developed supportive detail; a student who scores 5 or 6 has produced a paper which is generally well organized with supportive detail; a student who scores 4 is minimally proficient; and a student who scores 2 or 3 is in need of further diagnosis and possible remedial assistance.

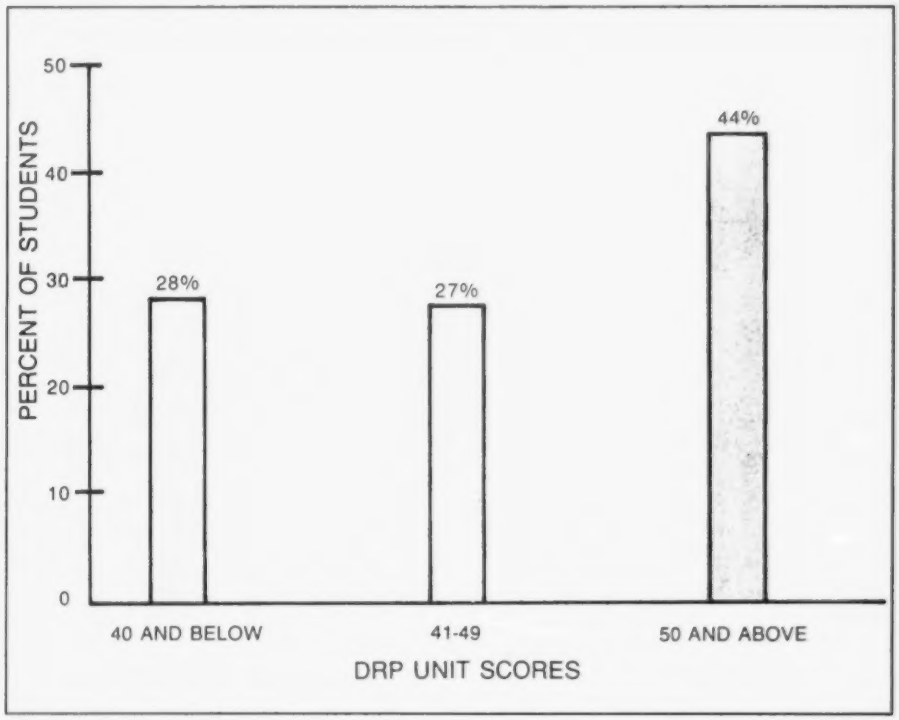
Chart 3
Writing Sample: Percent of Students at Each Score Point

DEGREES OF READING POWER® (DRP)® : AVERAGE DRP UNIT SCORE



This bar chart illustrates the average *DRP unit* score of students, statewide.

DEGREES OF READING POWER® (DRP)® : PERCENT OF STUDENTS AT SELECTED RANGES OF DRP UNIT SCORES



This bar chart illustrates the distribution of students, statewide, scoring in each of three *Degrees of Reading Power* (DRP) score categories. DRP score categories are interpreted as follows: a student who scores 50 DRP units or above can read, with high comprehension, materials which are typically used at grade 4 or above; a student who scores 41-49 DRP units can read, with high comprehension, materials which are typically used below grade 4 but above the Remedial Standard; and a student who scores 40 DRP units or below is in need of further diagnosis and possible remedial assistance.

Chart 4
Degrees of Reading Power (DRP): Percent of Students At Selected Ranges of DRP Unit Scores

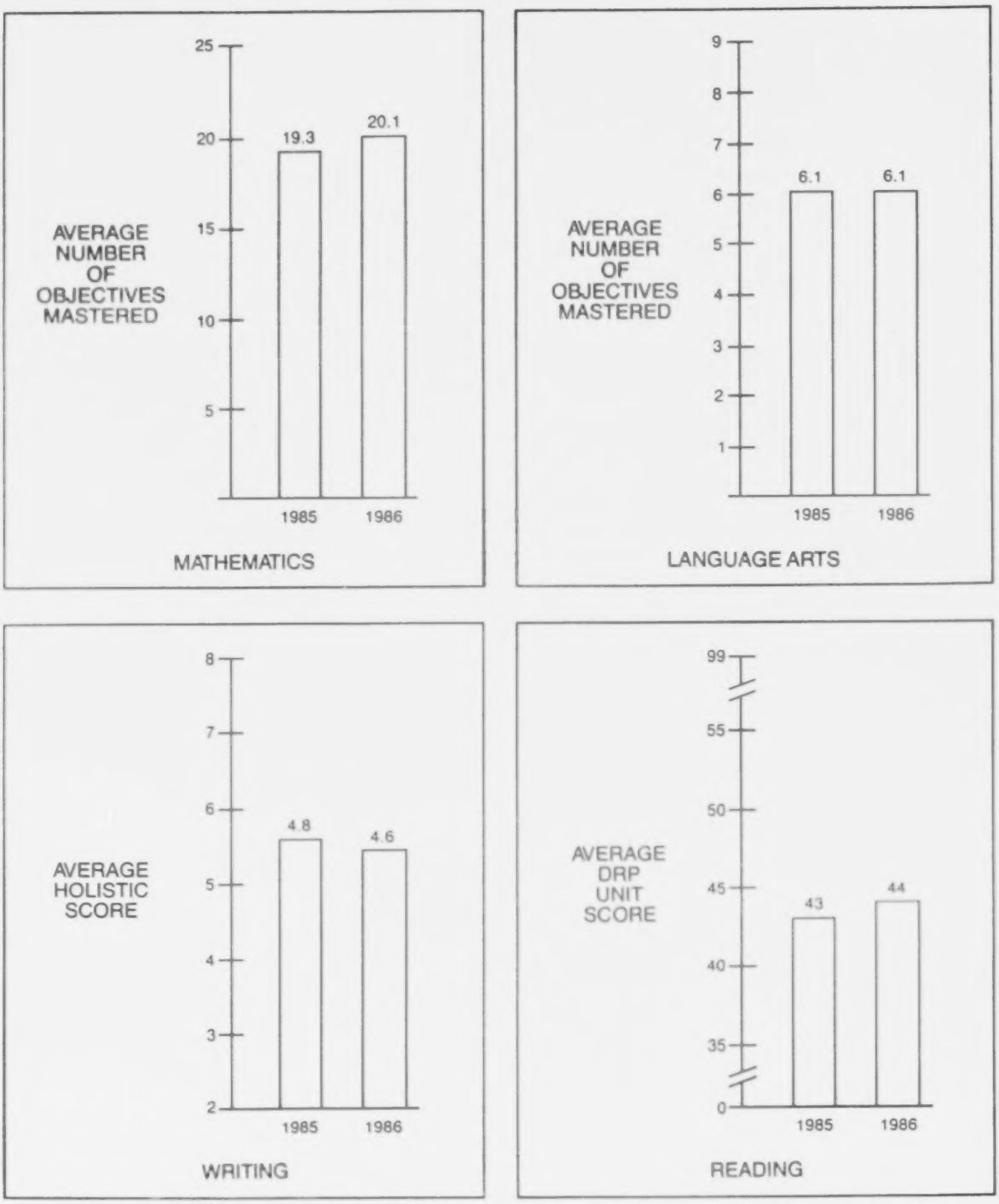


Chart 5
Comparison of 1985 and 1986 Results
Average Scores in Four Content Areas

In writing, fourth grade students averaged 4.6 points on a scale of 2 through 8. The state's goal is that all students be able to produce an organized, well-supported piece of writing, that is, a score of 7 or 8. Chart 3 (p. 15) illustrates that 13 percent of the students produced an organized, well-supported piece of writing (a 7 or an 8 score), and an additional 34 percent produced a paper which is generally well organized (a 5 or a 6 score). Another large group, 29 percent, scored a 4, which is defined as a "minimally proficient piece of writing." A total of 23 percent of the students scored a 2 or a 3, which is below the remedial standard.

In reading (Degrees of Reading Power Test), fourth grade students averaged 44 units on a scale of 15 through 99. The state's goal is that all students be able to read with high comprehension materials typically used at the fourth grade or above, that is, at least 50 on the scale. Chart 4 (p. 16) illustrates that 44 percent of the students scored at least 50 on the reading section, 27 percent scored between 41 and 49, and 28 percent scored below 41, which is the remedial standard. The average score of 44 suggests that Connecticut fourth graders typically can read, with high comprehension, materials normally used up to grade 4.

Comparison of 1985 and 1986 Test Results

Two out of four areas tested showed increases in 1986 when compared to 1985. In mathematics, the average number of objectives mastered was higher in 1986 (20.1) than in 1985 (19.3) and the average DRP unit score increased from 43 in 1985 to 44 in 1986. Performance in language arts did not change from 1985 to 1986 with the average number of objectives mastered in both years equal to 6.1. The only area to show a decrease was writing, where the average holistic score declined from 4.8 in 1985 to 4.6 in 1986.

Test Results by District

Appendix H (p. 67) and Appendix I (p. 75) present a listing of the mathematics and language arts test results, respectively, for Connecticut school districts. School districts are listed alphabetically, followed by regional school districts. The Type of Community (TOC) designation in the third column indicates the group with which each district or school has been classified. A definition of the TOC classifications is provided in Appendix J (p. 83).

Because the most valid comparisons for district scores are longitudinal within each district, the State Department of Education advises against making school district comparisons. The following caution should also be noted:

- It is not appropriate or meaningful to sum across the different tests and subtests because of differences in test length, mastery, and remedial standards. These comparisons are inappropriate since it is impossible to identify, solely on the basis of the above information, how the average student has performed in the districts being compared. Average scores and standard deviations provide more appropriate comparative information on how well the average student is performing, although many factors may affect the comparability of these statistics as well.

Participation Rate Results

Appendix K (p. 85) presents the number of fourth-grade students in each district and the percents of students who participated in the grade four mastery testing during the Fall 1986 statewide administration. The alphabetical listing of districts provides the following information for each district:

Column 1	The name of the district.
Column 2	The total fourth-grade population at the start of Mastery Testing.
Column 3	The number of students eligible for testing.
Column 4	The percent of total population exempted from testing.
Columns 5-8	The percent of eligible students tested in each content area.

The results in Appendix K illustrate that participation rates by school district on the fourth-grade CMT were quite high, with only a few exceptions.

APPENDIX A

Grade Four Mathematics Objectives

Grade Four Mathematics Objectives

The 25 objectives of the fourth grade mathematics test are listed below. There are four test items for each objective.

CONCEPTUAL UNDERSTANDINGS (28)

1. Identify the number one more, one less, ten more or ten less than a given number
2. Extend patterns involving numbers and attributes
3. Order whole numbers
4. Rewrite numbers using expanded notation
5. Rewrite numbers by regrouping tens and ones
6. Identify fractional parts of regions and sets from pictures for halves, thirds, fourths and sixths
7. Relate multiplication and division facts to rectangular arrays

COMPUTATIONAL SKILLS (20)

8. Know addition and subtraction facts to 18
9. Add and subtract one- and two-digit numbers without regrouping
10. Add one- and two-digit numbers with regrouping
11. Estimate sums and differences to 100
12. Multiply and divide by 2, 5 and 10

PROBLEM SOLVING/APPLICATIONS (32)

13. Identify objects or numbers that do or do not belong in a collection, matrix or array
14. Read and interpret bar graphs and pictographs
15. Read and interpret data from tables and charts
16. Identify or write number sentences from pictures
17. Identify number sentences from addition or subtraction story problems
18. Solve simple story problems involving addition or subtraction
19. Solve and identify number sentences in simple story problems involving addition and subtraction, with extraneous information
20. Identify needed information in problem situations

MEASUREMENT/GEOMETRY (20)

21. Measure length and identify appropriate units for measuring length and distance
22. Estimate lengths and areas
23. Tell time to the nearest hour, half hour and quarter hour, using analog and digital clocks
24. Determine the value of a set of coins
25. Identify shapes, angles,and sides

Performance on all 25 objectives are reported at the student, classroom, school, district and state levels.
(#) Number of items for each content area.

APPENDIX B

Grade Four Language Arts Objectives

Grade Four Language Arts Objectives

There are nine multiple choice objectives and two holistic measures, one for reading and one for writing, within the fourth grade language arts test.

Writing Mechanics (36)

1. Capitalization and Punctuation (12)
2. Spelling Words, Homonyms and Abbreviations (9)
3. Agreement (15)

Locating Information (11)

4. Schedules, Maps, Table of Contents, Title Page, and Dictionary (11)

Listening Comprehension (20)

5. Literal (7)
6. Inferential & Evaluative (13)

Reading Comprehension (36)

7. Literal (12)
8. Inferential (14)
9. Evaluative (10)

Degrees of Reading Power (56)

Writing Sample (1)

Holistic scoring provided for all students. Analytic scoring provided for students who score below the remedial standard of 4 (on a scale of 2-8).

Performance on all nine Language Arts objectives, the Degrees of Reading Power, and Writing Sample is reported at the student, classroom, school, district, and state levels.

(#) Indicates the number of items for each content area or objective.

APPENDIX C

Remedial (Grant) Standard-Setting Process

Remedial (Grant) Standard-Setting Process

Background

There are several acceptable strategies for setting standards on criterion-referenced tests. Each of the proposed methods has one or more unique characteristics. One common element to the various methods is that they all offer to the individuals who are setting the standards some process which reduces the arbitrariness of the resulting standard. Different methods accomplish this in different ways. All methods systematize the standard-setting process so that the result accurately reflects the collective informed judgment of those setting the standard.

Types of Standard-Setting Methods

Standard-setting methods can generally be categorized into three types: test question review, individual performance review and group performance review. Test question review methods specify a procedure for standard setters to examine each test question and make a judgment about that question. For example, standard setters might be asked to rate the difficulty or the importance of each question. These judgments are then combined mathematically to produce a standard. Individual performance review methods also require standard setters to make judgments, but the judgments are made on the basis of examining data that indicate how well individual students perform on test items. These data may be based on actual pilot test results or projected results using mathematical theories. In this method, additional student information, such as grades, may also be used to inform the standard setters. Group performance review methods provide for judgments to be made based on the performance of a reference group of students. That is, standard setters review the group performance and make a determination where the standard should be set based on the group results.

Selection of a Standard-Setting Method

Several factors affect the choice of a particular standard-setting method. The type of test is one consideration. For example, some methods are only appropriate for multiple choice questions or for single correct answer questions while other methods are more flexible. For example, time constraints are a consideration if student performance data are necessary. In this case, a pilot test must be conducted and the test results must be analyzed prior to setting the standards. Another consideration is the relative importance of the decisions that will be made on the basis of the standard. For example, a classroom test affecting only a few students would not require as stringent a procedure as would a statewide test determining whether a student is allowed to graduate from high school. Other relevant factors include the number of test items, permanence of the standard, purpose of the test, and the extent of available financial and other resources to support the standard-setting process.

On February 4, 1985, the Mastery Test Psychometrics Committee met to consider the issue of standard-setting procedures and voted unanimously to approve the following proposal.

A PROPOSAL FOR SETTING THE REMEDIAL STANDARDS ON THE CONNECTICUT MASTERY TESTS

1. Two standard-setting committees will be created: one for mathematics and one for reading and writing.

2. This description of a minimally proficient student will be given to each of the committees:

> Imagine a student who is just proficient enough in reading, writing, mathematics to successfully participate in his/her regular fourth-grade coursework.

3.A In mathematics, an adaptation of the Angoff procedure will be used. The committee will be provided with each item appearing on one form of the mathematics test. The committee will be given the following directions:

> Consider a group of 100 of these students who are just proficient enough to be successful in regular fourth-grade coursework. How many of them would be expected to correctly answer each of the questions.

The committee will rate each item. The committee will then be given the opportunity to discuss their rating of each item. Sample pilot data will be presented. Committee members will be given the opportunity to adjust their item ratings. The item ratings will then be averaged in accordance with the Angoff procedure in order to produce a recommended test standard.

3.B In reading, the committee will review and discuss each passage of the Degrees of Reading Power (DRP) test. Student performance data will be presented. The committee will consider the reading difficulty that should be expected of a student at the grade level being tested. The committee members will identify the passage that has the appropriate level of reading difficulty consistent with the above description of a minimally proficient student.

3.C In writing, the committee will read four sample essays. These essays will have been prescored holistically (on a scale from 2 to 8) in order to rank the quality of the essays. Committee members will classify essays into one of three categories: 1) definitely NOT proficient, 2) borderline, and 3) definitely proficient. These classifications will be discussed in light of the holistic scores. The committee will then classify approximately twenty-five additional essays. The essay ratings will be discussed in the same manner as the original four essays. When all essays have been discussed, the essays which fell in the borderline category will be focused upon to determine the standard. The committee will determine where among the borderline essays, the standard should be established.

4. The standards recommended in step 3 will be presented to the Mastery Test Implementation Advisory Committee for discussion and action.

Connecticut's Strategy

Several steps were employed to create an acceptable and valid test standard for Connecticut tests. Initially, a separate standard-setting committee was convened for each test on which standards are to be set. Individuals were chosen to serve as members on the committee on the basis of their familiarity with the area being assessed and the nature of the examinees. One source of such members is the test content committees related to the project. For example, members of the Mathematics Committee were represented on the committee setting standards for the mathematics mastery test.

The actual procedures used to set standards were an adaptation of a method proposed by William Angoff (1970). This test question review method required members of a standard-setting committee to estimate the probability that a question would be correctly answered by examinees who possess no more than the minimally acceptable knowledge or skill in the areas being assessed. Standard setters then reviewed pilot test data for sample items as further evidence of the appropriateness of the judgments being made. The original probability estimates assigned to each test question were reviewed and adjustments made by the standard setters. The final individual item probabilities were summed to yield a suggested test standard for each member of the committee. The suggested standards were averaged across members of the committee to produce the recommended test standard.

The recommended test standard was presented to the Mastery Test Implementation Advisory Committee and the State Board of Education.

In mid-March, Mathematics and Language Arts Standard-Setting Committees met to set the remedial standards for the Grade 4 Mastery Test. The following information summarized the results of the standard-setting activities conducted by CSDE staff:

I. Mathematics (100 item test)

Using the procedures previously outlined, the standard setters rated each item and considered the pilot data. Committee members discussed items and were given the opportunity to adjust their initial ratings. The final ratings were averaged to produce a remedial standard. It is recommended that a raw score of 69 be the remedial mathematics standard. Below is a summary of the ratings.

Procedure	# Judges	Range %	Mean % Correct	Raw Score
Angoff	21	56.7-81.3	68.7	68.7

II. Reading (Degrees of Reading Power, 56 item test)

Standard setters used two procedures to establish a remedial reading standard. First, they examined the passages in the Degrees of Reading Power (DRP) test, asking themselves which passage is too difficult for the student who is just proficient enough to successfully participate in fourth-grade coursework. Discussion occurred throughout this selection process.

Second, they examined textbooks which are typically used in grades 3 and 4 and selected those textbooks which a minimally proficient student would not be expected to read in order to successfully participate in fourth-grade coursework. Discussion occurred throughout this selection process.

The average readability values of the selected passages and textbooks and the pilot test data were then revealed to the standard setters. The standard setters discussed the readability values and the pilot test data and recommended the DRP unit score of 41 as the remedial standard. This standard was accepted by the State Board of Education at the 70% comprehension level. Below is a summary of the ratings.

Procedure	# Judges	Readability Range	Recommended Remedial Standard
A. Test Passage Review	17	42-48 DRP Units	41 DRP Units
B. Textbook Review	17	42-51 DRP Units	

III. Writing (45 minute writing sample)

Using the procedure previously outlined, standard setters read and rated 21 essays written to a narrative prompt and 21 essays written to an expository prompt. After discussions and final ratings, the holistic scores for the papers were revealed to the group. The committee then discussed the appropriate remedial writing standard in light of the degree to which their ratings matched the holistic scores. It was the recommendation of the committee that holistic writing score of 4 be used as the remedial writing standard. Below is a summary of the ratings.

NARRATIVE PROMPT
Rating After Discussion

Holistic Score	Definitely NOT Proficient	Borderline	Definitely Proficient
2	84%	4%	12%
3	37%	6%	57%
4	4%	4%	92%
5	8%	6%	86%
6	20%	2%	78%
7	4%	0%	96%
8	4%	2%	94%

EXPOSITORY PROMPT
Rating After Discussion

Holistic Score	Definitely NOT Proficient	Borderline	Definitely Proficient
2	94%	0%	6%
3	33%	2%	65%
4	4%	12%	84%
5	0%	2%	98%
6	2%	4%	94%
7	0%	0%	100%
8	0%	0%	100%

LANGUAGE ARTS STANDARD-SETTING COMMITTEE

Evelyn P. Burnham, Colebrook Public Schools
Nicholas P. Criscuolo, New Haven Public Schools
Mary R. Fisher, Thompson Public Schools
Marguerite Fuller, Bridgeport Public Schools
Anne Jackel, Thompson Public Schools
Dorothy Kaplan, Middletown Public Schools
Bob Lincoln, Tolland Public Schools
Virginia Lity, Bridgeport Public Schools
Virginia Manulls, Colebrook Public Schools
Noreen McDermott, Hartford Public Schools
Elizabeth Nelligan, Canton Public Schools
Dorothy Nevers, Canton Public Schools
Carol D. Parmelee, Middletown Public Schools
Beverly R. Peterman, Stamford Public Schools
Geraldine Smith, Canton Public Schools
Robert Kinder, CT State Department of Education
Mary Weinland, CT State Department of Education

MATHEMATICS STANDARD-SETTING COMMITTEE

Betsy Andersen, Manchester, Connecticut
Geraldine M. Cemprola, Ridgefield Public Schools
Linda Cherry, Suffield Public Schools
Elizabeth B. Cubeta, Middletown Public Schools
Corretta K. Dean, Bridgeport Public Schools
Tony Ditrio, Norwalk Public Schools
Anita Gaston, Bloomfield Public Schools
Janet Heintz, Farmington Public Schools
Mary Anna Keough, Meriden Public Schools
Wesley Masten, Norwalk Public Schools
Irene B. Moriarty, Meriden Public Schools
Pamela Munro, Windham Public Schools
Eileen O'Reilly, Manchester Public Schools
Lois Piper, Norwalk Public Schools
Twila Pollard, New Haven Public Schools
Rosemary Powers, Bloomfield Public Schools
Sylvia E. Webb, Middletown Public Schools
George A. Wells, New Haven Public Schools
Frank K. Whittaker, Bridgeport Public Schools
Betsy Carter, CT State Department of Education
Steven Leinwand, CT State Department of Education

APPENDIX D

Marker Papers for Holistic Scoring

CONNECTICUT MASTERY TEST GRADE 4 WRITING SAMPLE 1 0 7 8 2

2

I saw lot of thing

I saw bear and lion and I saw Snake and makey. And I saw tiger duck and I saw goat then we feed the duck and goat and we eat our lunch.

I heard about thing And goat and lion, duck, tiger, Snake, yak, bear and I heard about feeding them and I heard about you can eat there and you can go there.

I smelled a lot of thing I smell dear and goat and I smell duck and water and I smell cow and I smell fish. And hay and I smell something stink.

I tast thing

I task and apple and I tast a sandwiches and cooke and I tast candy and meat and I tast cake and ice cream and I tast some chip and pizza.

Score Point: 1

This response is a a repetitious list. There is not enough new information for a higher score.

CONNECTICUT MASTERY TEST GRADE 4 WRITING SAMPLE 10790

1

One day I went to a plant and I saw little people they was making magic and I smiled fudge. And I tade it and it tast like fudge. And it was good And we had to go we said bye. And when we got on earth I told people we seen little people on mars

The End

Score Point: 1

This response is too sparse for a higher score.

CONNECTICUT MASTERY TEST GRADE 4 WRITING SAMPLE 1 7 3 0 4

3

My Story is about creatures.

One day ago a friend of mine ask me to go with them on a trip.
I ask him where was he going.
To mrase I did'nt belive him but I said ok. So We went to this racket Place.
Then I belive him So we got a racket from the man. I ask my futher do he now how to drive the racket he said Yes. So when we got there I Saw a creature with long ears. Then I heard a Strains Sound it was a chicken quacken. Then I smell something it Smelled like snack but it was'nt it was that chicken. I went to ask the creatures if I cod taes the chicken.

The End

Score Point 2:
This response has a sustained narrative sequence, although there are some leaps in time.

CONNECTICUT MASTERY TEST GRADE 4 WRITING SAMPLE 1 0 7 9 8

4

I just return from Mars and the place smelled like damp stocks. I saw green Earth Leeing. They ate earthworms! They talk funny. They talk like cats. meow meow. They made me eat Earth worms. They are good. they lives in cavenn a hill.

Score Point 2:
Although this response is sparse, the details are very specific. In addition, information (they talk funny) is explained. This is a low "2."

CONNECTICUT MASTERY TEST GRADE 4 WRITING SAMPLE 1 3 3 2 7

5

On Sept 29, 1995 I came hom I tolled the scientists that there was life on the plant Plutce. I saw a thing called a grunt. It hade teeth six feet long! It was 300 feet long and it was invisudle but wen it got in the way ove: eltrie floow it came visable. It tore up five ove our men! Its vosie sandy liche a tigre grown. It smielled liche a rotten apple a rotten egg and anthing that gose rotten. It ate peaples bad thaths and eath time our men that a bad thing it wood get: stronger.

- Score Point 2:
  This response has a complete description of the creature. The details are specific and sustained.

CONNECTICUT MASTERY TEST GRADE 4 WRITING SAMPLE 1 0 7 9 2

6

The Wierd Planet

I had just come from the wierd planet Zolyie on a space ship. Zolyie was the planet out in the second demention. It was very wierd there. Frog legs were comon around there. In the ocean out there was a fish called Sea Whapers. I tried some of them and they were very good. Their ocean streches out two hundred and fifty billion miles. I stayed there for a year. I took me two weeks to try to comunicate with the alians. They were blue and green and some of them were purple and marroon. Luckily I braught some food with me. There food looked like out of this dimention. Then when I came back to earth, I had braught some alian food with me. All my friends tried it and they hated it.

The End

Score Point 2:
This is a high "2." There is a sufficient amount of specific details; however, the lack of a clear plan and the list-like quality keep this response at the "2" level.

CONNECTICUT MASTERY TEST GRADE 4 WRITING SAMPLE 13311 7

My Space Adventrue

One day we went to a nhorld planet when We landed we were atcaded by weard creatrue, They shoot one crew member with same kind of ray. And he was frazen soliad he could not move at all. All We did surender, They chared us in a gest wall And There gard all hover the place, so could not do anything. They Food and drink, but din't eat it. The next day they unchared us but we were used as slaves. One day my buddy acted like he sleeping and gards wrent watching and he exscaped and left me behind to fight the, they locked me into some kind of chamber with elixtric bars, then they took to there King he was half human and half most he was the oglyest of them all. He said let me see the humas repeat him to die Yes sir the main gard said them all in ten minites a space ship came later and torpides at the and shot all there and I was saved

Score Point 3:
This response has an elaborated sequence of events. The transitions make it possible to move smoothly from idea to idea.

CONNECTICUT MASTERY TEST GRADE 4 WRITING SAMPLE 13333 8

Score Point 3:
This response is basically a description. The details are elaborated resulting in good visual imagery.

One day I went to the planet X. I stayed there four two weeks. I saw furny, four eyed creatures called the Zoopies. They live in a funny home, it is made with dirt. I ate the same food every day. It is called mellows. They are not that good. They somehow taste like marshmellows. The Zoopies ate the same food every day. I heard funny little noises like swigg, swash. I have smelled the air in the planet X. It smells like ashes. I have sleeped in beds that are made with cotton. They have fun there. Even I did too. When the morning come the sun is the color orange. It was very warm. I like to play outside with my freds. Their names are Kidk Tom, Miss and Jerry. We even made our own swings. The rope was made with vines. The vines are very strong they will never break. Then I had to go to earth. I was so happy to see earth again.

CONNECTICUT MASTERY TEST — GRADE 4 WRITING SAMPLE 1 3 3 6 0
9

Once upon a time I was in outer space. I saw the funnyest thing in my life. It was a small furry animal. The animal has big eyes and big feet. He had antennas with little dots on them strange because his head was green his feet were purple his hands were orange and his body was yellow. It can jump up and down all he gets very angry He will pull out his antennas off and pull some fur off. Some of the things he eats are worms, ants, deer and beetel. And he smelled very awful. I heard loud noises and it was the big furry animal. Any way his name was Boots I never herd such a name before. Then I heard a noise, I turned around around and there were more furry animals around. Then there were getting closer and closer. Then the took my hand and brought me into there house with they

9a

lived on a moon that has rubals on it. You got to be carful in the moon because you can fall into one of the rubals on the moon. Any way after they took me inside the house it was very nice inside. It had a glass lamp with real diman's hanging on it. The lits on the lamp were very brite. They had a kitchen too. There stove was real medival. It was so clean you can see yourself in the stove. The kind of store they had was a glass door. I really wish I lived there but there was no air up in outer space. It was a furry animal that would prolbably be living up there on the moon. But it is more fun living on earth so you can breath better and if one of those furry animal came down to earth it would be running away from the furry animal because I really did not like going up in outer space

because you can't breath too
well. I would be able to go
up in outer space only if I
had an oxygen tank and
a grey or black suit too
astronaut

Score Point 3:
This response has good specific description; however, the response rambles and is repetitive weakening the overall impression.

CONNECTICUT MASTERY TEST GRADE 4 WRITING SAMPLE 1 3 2 9 6

10

When I got to the planet I saw strange little huts with a door and two round windows. When I stepped out the atmosphere seemed fine to breath in. I look into one of the windows and saw six people with one eye three ears and six legs. When I looked at my solar energy pulsar watch the readings were weird. They were the same as on earth. When I stepped in it was blazing hot. All six of them stared at me and I started for the door but then I heard one of them say wait. He seemed to be larger than the others. I stopped suddenly. I slowly turned around and asked if he new english. He said they've been studying our planet for a long time. He also asked if I wanted some speghetti. I said alright. When I was done I asked how he got the speghetti. He said he stole the speghetti. I wondered if he stole the speghetti out of our cabinets. Then I asked him if he wanted to go for a walk. I asked him the name of the planet and he said Galartastar. We came across a lot of tall buildings. I asked what they were for and he said business. I asked him where he worked and he showed me the shortest building. I asked him if he would shaw me the way back. He pointed at a telephone booth sort of thing and we were transported back to his house. When we got there I hopped into my cruiser and came back here.

Score Point 4:
This response is vivid and controlled. The narrative is sustained and elaborated with appropriate details.

53

CONNECTICUT MASTERY TEST GRADE 4 WRITING SAMPLE 1 3 3 4 1

Score Point 4:
Like the previous paper, this response is a sustained, controlled, vivid narrative.

11

The Ugnots

When I was at this... other planet I saw some strange lumps with strange blue lights coming from them. Suddenly a strange creature stepped out and then another and another now they were poring out of everywhere as if to greet me... no they were all going to the very middle where (I don't see how I failed to see it before) There was a large and very beautyful stone that seemed to be glowing in a very strange way, yes... it was and one of the creatures was actualy looking into it as if for guidense. It looked up and gestured for me to come in to one of the lumps that seemed to be there home. It smelled of a strange odor. Then suddenly I heard a strange loping sound. I looked out and saw a strange sort of purpul water. None of these creatures were out any more they were all inside a house. Then the one who had brought me in told me they were the Ugnots. He gave me something to eat that tasted sort of bitter and that put me to deep and when I woke up I was in a ladratory back on earth where they were studying my mind to see what happened... The end

54

APPENDIX E

Analytic Rating Guide and Marker Papers for Analytic Scoring

GRADE FOUR ANALYTIC RATING GUIDE

FOCUS: How effectively does the writer unify the paper by a dominant topic?

1 = switches and/or drifts frequently from the dominant topic
2 = switches and/or drifts somewhat from the dominant topic
3 = stays on topic throughout the response

ORGANIZATION: Is there a plan that clearly governs the sequence from the beginning to the end of the response and is the plan effectively signaled?

1 = no discernible plan
2 = inferable plan and/or discernible sequence; some signals may be present
3 = controlled, logical sequence with a clear plan

SUPPORT/ELABORATION: To what extent is the narrative developed by details that describe and explain the narrative elements (character, action, and setting)?

1 = vague or sketchy details that add little to the clarity of the response
2 = details that are clear and specific but are list-like, or uneven, or not developed
3 = well-developed details that enhance the clarity of the response

SENTENCE FORMATION: Are sentences correctly formed?

1 = many run-ons, "on-and-ons," fragments, and/or awkward constructions--may cause confusion
2 = some run-ons, "on-and-ons," fragments, and/or awkward constructions--may cause confusion
3 = few errors and/or awkward constructions--no confusion

MECHANICS: To what extent does the student use the conventions of standard written English (e.g. spelling, usage, capitalization, punctuation)?

1 = many errors
2 = some errors
3 = few errors

CONNECTICUT MASTERY TEST GRADE 4 WRITING SAMPLE 133081

It was fun I raged my self out i saw thing ugly thing. Then I heard thing and smell something evil I tasted some Thay whre good like the goodest chocolate cream soop. I Then they took me some whre they like soomm soomm. soomm thay mean we will take good care of me for Forever you I was happy on the sekrat day that brog me to the membership. It was exciting the men was my wife i have not seen her for two days. I said what are you doing here i said. She said when I was at work the tame and took me for canister her for sex but they said soomm soomm you will stay with me she said ok and he said The End

Analytic Score Points

Focus: 2

Organization: 1

Support/Elaboration: 1

Sentence Formation: 1

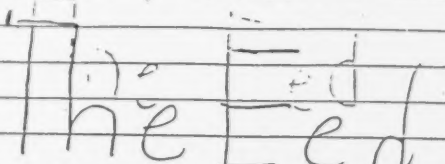
Mechanics: 1

CONNECTICUT MASTERY TEST GRADE 4 R II WRITING SAMPLE 1 0 7 0 4

I came of a distant Panent and I heard. Werd noise it was very werd. And saw werd home and I tasted Wam Sanp ti was. Yek I repor- for the Werd thing. And I went to New Your to report. Then I basit ito of to Plyto. Then I han Sank Sanp it Was. Yek and We at. Neptune sank Senpe Then We went to the Jupter sun park we want to the Mars warer it was. Yer Pluto was a mase Then I went to Mars it was nice we to Venus then we wen- to the Sun it wes very hot very hot we had! Wem Sanp and it was hot. And Yeke Then we Went to Pluto to the Jupter sun park we went to Mars warter to go fish and swing in was nice to be home. Then we to the saturn trer at tree was saw big it was 200 feet and we cate it the wes verg big Saturn and ti was Yek tree then we. Care don it was very fun. So hed go beak home to Nev Your than the wranus cane to New Your in my siup

58

and they so the Uranus they like in My homes it was very fun. Thny like it at my homes it was a fun to



Analytic Score Points

Focus: 2

Organization: 1

Support/Elaboration: 1

Sentence Formation: 1

Mechanics: 1

59

CONNECTICUT MASTERY SAMPLE 1|0|7|9|0

One day I went to a shop and I saw little people they was making pizza and I smelled fudge. And I tode it and it tast like fudge. And it was good And we had to go we said bay. And when we got on earth I told people we seen little people on mar

The End

Analytic Score Points

Focus: 3

Organization: 2

Support/Elaboration: 1

Sentence Formation: 1

Mechanics: 1

CONNECTICUT MASTERY TEST GRADE 4 WRITING SAMPLE 1|3|2|3|7

2

When I went to mars

When I went to mars I saw funny little thing they new how to talk but bee was a baby who new how to walk the other baby didn't and the other name was zame and zame was makeing food they call it zils it smelled like oranges and banan and spaget I did not like the smell and I asked me did I want to Fasted it is go I said no thang they said it is good I said what is it oranges and banan and spaget I said I was White they said was good They said how dose it taste. I said ok but I didn't lik it I play like it was go I went home I was glad I was hom

Analytic Score Points

Focus: 3

Organization: 2

Support/Elaboration: 1

Sentence Formation: 1

Mechanics: 1

CONNECTICUT MASTERY TEST GRADE 4 WRITING SAMPLE 1:785

I just come from a planet named valazame and I saw a big alen with big ears an I heard talk he sounded like a baby and you now what smelled like he smelled like watcher and I ate ice cream with him I didn't taste it like Americans ice cream then I sleep on the moon I had a great time up in valazame and when I left he told me his name his name was big ears and I told him my and he sed by Marcus.

Analytic Score Points

Focus: 3

Organization: 2

Support/Elaboration: 1

Sentence Formation: 1

Mechanics: 2

CONNECTICUT MASTERY TEST GRADE 4 WRITING SAMPLE 1 1 7 3 0 9

3

My story is about creatures.

One day ago a friend of mine ask me to go with them on a trip.
I ask him where was he going.
To mrase I didn't belive him but I said ok. So we went to this racket place.
Then I belive him so we get a racket from the man. I ask my father do he now how to drive the racket he said yes. So when we got there I saw a creature with long ears. Then I heard a straing sound it was a chicken quacken. Then I smell something it smelled like snack but it wasn't it was that chicken. I went to ask the creatures if I sod taco the chicken.

The End

Analytic Score Points

Focus: 3

Organization: 2

Support/Elaboration: 2

Sentence Formation: 1

Mechanics: 2

CONNECTICUT MASTERY TEST GRADE 4 WRITING SAMPLE 1|0|7|9|8

I just return from Mars and the place smelled like damp stocks. I saw green Earth Leeing. They ate earthworms! They talk funny. They talk like cats. meow meow. They made me eat earth worms. They are good. They lives in caveon a hill.

Analytic Score Points

Focus: 3

Organization: 2

Support/Elaboration: 2

Sentence Formation: 3

Mechanics: 1

CONNECTICUT MASTERY TEST GRADE 4 WRITING SAMPLE 1|3|2|4|0|7

Creatures

one Day I was walking down the street, and I saw my friend. He said Hi John How are you I said I am fine. John I have something for you what is It, It's a trip to go to outter space. What! for me Yes It is. So that very afternoon we left. It was great. It took 100 Days to get there, Because we broake down on the way. we saw Creatures so me and John speeded up even ive new that a space ship can not go very very very fast. Twe saw Creatures playing base ball It was weird Because they playdiffantly. I heard weird thing like ZZYOOK A MAIVN WW.DJJSh17YI gos they do not have vowels I said.

Analytic Score Points

Focus: 3

Organization: 2

Support/Elaboration: 2

Sentence Formation: 2

Mechanics: 2

CONNECTICUT MASTERY TEST GRADE 4 WRITING SAMPLE 10788

Planet Report

I saw creatures that looked half dog and half human. They were hairy. for a snack they like to eat cats! They almost ate me!

They spoke our language. I talked to them they were nice. It was very fun talking to them.

I said "I'm hungry" and the leader said "Do you want a cat?" I said "Na" So I went back to earth.

Analytic Score Points

Focus: 3

Organization: 2

Support/Elaboration: 2

Sentence Formation: 3

Mechanics: 3

CONNECTICUT MASTERY TEST GRADE 4 WRITING SAMPLE 10789

Stranbeh on Tuipiter

When I was in the space shuttle suyden lee we herd a crash. I searvide They died in the crash a weird looking thing It had four eyes, seven feet, and three noses. It said hye what your name I said Kamau. Then I said whats your name Suesley She said want to see my veleg. I said ok lets go and we humde to her velege But her velge was atack by trolls. And the people were gone. But the snack on shep the freeed the People and left on the space shuttle the end

Analytic Score Points:

Focus: 3

Organization: 3

Support/Elaboration: 1

Sentence Formation: 2

Mechanics: 1

Analytic Set

CONNECTICUT MASTERY TEST GRADE 4 WRITING SAMPLE 1 3 2 9 3

3

The Retrun from plant mars
I had to think how to get hone.
A Day later a roaket pass and
I jang on. Then it took me home.
We crash land in the Alantoc ean.
When we got out it was about
25 scientists, a was asking me
How was it. They said how was the
mars men house. I said it was like
a tire. Then they ask me hwas they
Food tasted. I said good and I got
Food and staff back. Then They
said howsmell like? I said good. They said
what did hear how did I saw? I said
little colorful men. I heard f
Pteranodon noise. I am a scientiste
The End

Analytic Score Points

Focus: 3

Organization: 3

Support/Elaboration: 2

Sentence Formation: 1

Mechanics: 1

CONNECTICUT MASTERY TEST GRADE 4 WRITING SAMPLE 1 3 3 3 1

8

The distant plant

I have just return for a distant plant. I saw a ugle looking creater valking to a dark cave. near he lived. I heard them talking in a diffant lagwanth. I smelled a camp fire nert by so I went to cest it out. When I got thear I saw the createres eating warms. I got scard I ran in to the spaceship and leafed.

Analytic Score Points

Focus: 3

Organization: 3

Support/Elaboration: 2

Sentence Formation: 3

Mechanics: 1

CONNECTICUT MASTERY TEST 1 GRADE 4- WRITING SAMPLE 1 3 3 2 7

On Sept 29, 1995 I came hom I tolled the scientists that there was life on the plant Plutce. I saw a thing called a grunt. It hade teeth six feet long! It was 300 feet long and it was invisudle but wen it got in the way ove eltrie floow it came visable. It tore up five ove our men! Its vosie sandy liche a tigre grown. It smelled liche a rotten apple a rotten egg and anthing that gose rotten. It ate peaples bad thoths and eath time our men that a bad thing it wood get stronger.

Analytic Score Points

Focus: 3

Organization: 3

Support/Elaboration: 2

Sentence Formation: 3

Mechanics: 1

APPENDIX F

Sample Grade Four Mastery Test Score Reports

- o Class Diagnostic Report
  - Mathematics
- o School by Class Report
  - Mathematics
- o District by School Report
  - Mathematics
- o Class Diagnostic Report
  - Language Arts
- o School by Class Report
  - Language Arts
- o District by School Report
  - Language Arts
- o Parent/Student Diagnostic Report

CLASS DIAGNOSTIC REPORT

CONNECTICUT MASTERY TESTING PROGRAM — MATHEMATICS

GRADE 4 FORM B — PAGE

TESTING DATE:
NUMBER OF STUDENTS TESTED:

NUMBER OF STUDENTS NEEDING FURTHER DIAGNOSIS IN MATHEMATICS:

MATHEMATICS OBJECTIVES TESTED	MASTERY CRITERIA # OF ITEMS CORRECT	NUMBER/PERCENT OF STUDENTS MASTERING EACH OBJECTIVE		
		CLASS	SCHOOL	DISTRICT
		# / %	# / %	# / %
CONCEPTUAL UNDERSTANDINGS				
1. DETERMINE 1 AND 10 MORE/LESS THAN A NUMBER	3 OF 4			
2. EXTEND PATTERNS	3 OF 4			
3. ORDER WHOLE NUMBERS	3 OF 4			
4. REWRITE NUMBERS WITH EXPANDED NOTATION	3 OF 4			
5. REWRITE NUMBERS BY REGROUPING	3 OF 4			
6. IDENTIFY FRACTIONAL PARTS	3 OF 4			
7. RELATE MULT/DIV FACTS TO PICTURES	3 OF 4			
COMPUTATIONAL SKILLS				
8. ADD/SUBTRACT FACTS TO 18	3 OF 4			
9. ADD/SUBTRACT WITHOUT REGROUPING	3 OF 4			
10. ADD WITH REGROUPING	3 OF 4			
11. ESTIMATE SUMS/DIFFERENCES	3 OF 4			
12. MULTIPLY/DIVIDE BY 2, 5, 10	3 OF 4			
PROBLEM SOLVING/APPLICATIONS				
13. IDENTIFY OBJECTS/NUMBERS IN ARRAYS	3 OF 4			
14. READ/INTERPRET GRAPHS	3 OF 4			
15. READ/INTERPRET TABLES	3 OF 4			
16. IDENTIFY NUMBER SENTENCES FROM PICTURES	3 OF 4			
17. IDENTIFY NUMBER SENTENCES FROM PROBLEMS	3 OF 4			
18. SOLVE STORY PROBLEMS WITH +/-	3 OF 4			
19. SOLVE STORY PROBLEMS WITH EXTRA INFO	3 OF 4			
20. IDENTIFY NEEDED INFO IN PROBLEMS	3 OF 4			
MEASUREMENT/GEOMETRY				
21. MEASURE LENGTH/IDENTIFY UNITS	3 OF 4			
22. ESTIMATE LENGTH/AREA	3 OF 4			
23. TELL TIME	3 OF 4			
24. DETERMINE VALUE OF A SET OF COINS	3 OF 4			
25. IDENTIFY SHAPES/ANGLES/SIDES	3 OF 4			
TOTAL NUMBER OF OBJECTIVES MASTERED		AVERAGE # OF OBJECTIVES MASTERED		
		NUMBER OF ITEMS CORRECT	NUMBER/PERCENT OF STUDENTS BELOW REMEDIAL STANDARD	
MATHEMATICS REMEDIAL STANDARD	69 OF 100 ITEMS COR			

*INDICATES A SCORE BELOW THE REMEDIAL STANDARD. THIS STUDENT MUST RECEIVE FURTHER DIAGNOSIS.

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CONNECTICUT MASTERY TESTING PROGRAM

SCHOOL BY CLASS REPORT

MATHEMATICS

GRADE 4 FORM B

PAGE

TESTING DATE:

SCORES INDICATE NUMBER/PERCENT OF STUDENTS MASTERING EACH OBJECTIVE

MATHEMATICS OBJECTIVES TESTED	MASTERY CRITERIA	# / %	# / %	# / %	# / %	# / %	# / %	# / %	# / %	SCHOOL # / %	DISTRICT # / %
NUMBER OF STUDENTS TESTED											
CONCEPTUAL UNDERSTANDINGS											
1. DETERMINE 1 AND 10 MORE/LESS THAN A NUMBER	3 OF 4										
2. EXTEND PATTERNS	3 OF 4										
3. ORDER WHOLE NUMBERS	3 OF 4										
4. REWRITE NUMBERS WITH EXPANDED NOTATION	3 OF 4										
5. REWRITE NUMBERS BY REGROUPING	3 OF 4										
6. IDENTIFY FRACTIONAL PARTS	3 OF 4										
7. RELATE MULT/DIV FACTS TO PICTURES	3 OF 4										
COMPUTATIONAL SKILLS											
8. ADD/SUBTRACT FACTS TO 18	3 OF 4										
9. ADD/SUBTRACT WITHOUT REGROUPING	3 OF 4										
10. ADD WITH REGROUPING	3 OF 4										
11. ESTIMATE SUMS/DIFFERENCES	3 OF 4										
12. MULTIPLY/DIVIDE BY 2, 5, 10	3 OF 4										
PROBLEM SOLVING/APPLICATIONS											
13. IDENTIFY OBJECTS/NUMBERS IN ARRAYS	3 OF 4										
14. READ/INTERPRET GRAPHS	3 OF 4										
15. READ/INTERPRET TABLES	3 OF 4										
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18. SOLVE STORY PROBLEMS WITH +/-	3 OF 4										
19. SOLVE STORY PROBLEMS WITH EXTRA INFO	3 OF 4										
20. IDENTIFY NEEDED INFO IN PROBLEMS	3 OF 4										
MEASUREMENT/GEOMETRY											
21. MEASURE LENGTH/IDENTIFY UNITS	3 OF 4										
22. ESTIMATE LENGTH/AREA	3 OF 4										
23. TELL TIME	3 OF 4										
24. DETERMINE VALUE OF A SET OF COINS	3 OF 4										
25. IDENTIFY SHAPES/ANGLES/SIDES	3 OF 4										
AVERAGE NUMBER OF OBJECTIVES MASTERED											
NUMBER/PERCENT OF STUDENTS BELOW REMEDIAL STANDARD*											

*REMEDIAL STANDARD IS 69 OF 100 ITEMS CORRECT.

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CONNECTICUT MASTERY TESTING PROGRAM

DISTRICT BY SCHOOL REPORT

MATHEMATICS

GRADE 4 FORM B

PAGE

TESTING DATE:

SCORES INDICATE NUMBER/PERCENT OF STUDENTS MASTERING EACH OBJECTIVE

										DISTRICT	
NUMBER OF STUDENTS TESTED											
MATHEMATICS OBJECTIVES TESTED	MASTERY CRITERIA	# / %	# / %	# / %	# / %	# / %	# / %	# / %	# / %	# / %	
CONCEPTUAL UNDERSTANDINGS											
1. DETERMINE 1 AND 10 MORE/LESS THAN A NUMBER	3 OF 4										
2. EXTEND PATTERNS	3 OF 4										
3. ORDER WHOLE NUMBERS	3 OF 4										
4. REWRITE NUMBERS WITH EXPANDED NOTATION	3 OF 4										
5. REWRITE NUMBERS BY REGROUPING	3 OF 4										
6. IDENTIFY FRACTIONAL PARTS	3 OF 4										
7. RELATE MULT/DIV FACTS TO PICTURES	3 OF 4										
COMPUTATIONAL SKILLS											
8. ADD/SUBTRACT FACTS TO 18	3 OF 4										
9. ADD/SUBTRACT WITHOUT REGROUPING	3 OF 4										
10. ADD WITH REGROUPING	3 OF 4										
11. ESTIMATE SUMS/DIFFERENCES	3 OF 4										
12. MULTIPLY/DIVIDE BY 2, 5, 10	3 OF 4										
PROBLEM SOLVING/APPLICATIONS											
13. IDENTIFY OBJECTS/NUMBERS IN ARRAYS	3 OF 4										
14. READ/INTERPRET GRAPHS	3 OF 4										
15. READ/INTERPRET TABLES	3 OF 4										
16. IDENTIFY NUMBER SENTENCES FROM PICTURES	3 OF 4										
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18. SOLVE STORY PROBLEMS WITH +/-	3 OF 4										
19. SOLVE STORY PROBLEMS WITH EXTRA INFO	3 OF 4										
20. IDENTIFY NEEDED INFO IN PROBLEMS	3 OF 4										
MEASUREMENT/GEOMETRY											
21. MEASURE LENGTH/IDENTIFY UNITS	3 OF 4										
22. ESTIMATE LENGTH/AREA	3 OF 4										
23. TELL TIME	3 OF 4										
24. DETERMINE VALUE OF A SET OF COINS	3 OF 4										
25. IDENTIFY SHAPES/ANGLES/SIDES	3 OF 4										
AVERAGE NUMBER OF OBJECTIVES MASTERED											
NUMBER/PERCENT OF STUDENTS BELOW REMEDIAL STANDARD*											

*REMEDIAL STANDARD IS 69 OF 100 ITEMS CORRECT.

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CLASS DIAGNOSTIC REPORT

CONNECTICUT MASTERY TESTING PROGRAM

LANGUAGE ARTS

PAGE

GRADE 4 FORM B

TESTING DATE:
NUMBER OF STUDENTS TESTED:

NUMBER OF STUDENTS NEEDING FURTHER DIAGNOSIS
IN WRITING:
IN READING:

LANGUAGE ARTS OBJECTIVES TESTED	MASTERY CRITERIA # OF ITEMS CORRECT	NUMEER/PERCENT OF STUDENTS MASTERING EACH OBJECTIVE		
		CLASS # / %	SCHOOL # / %	DISTRICT # / %
WRITING MECHANICS				
1. CAPITALIZATION & PUNCTUATION	9 OF 12			
2. SPELLING (WORDS, HOMONYMS, AND ABBREVIATIONS)	7 OF 9			
3. AGREEMENT (VERB TENSE, SUBJECT/VERB, AND PRONOUN REFERENT)	11 OF 15			
4. **LOCATING INFORMATION** (SCHEDULES, MAPS, TABLE OF CONTENTS & TITLE PAGE, AND DICTIONARY)	8 OF 11			
LISTENING COMPREHENSION				
5. LITERAL	5 OF 7			
6. INFERENTIAL & EVALUATIVE	9 OF 13			
READING COMPREHENSION				
7. LITERAL	9 OF 12			
8. INFERENTIAL	10 OF 14			
9. EVALUATIVE	7 OF 10			
TOTAL NUMBER OF OBJECTIVES MASTERED		AVERAGE # OF OBJECTIVES MASTERED		
HOLISTIC MEASURES OF WRITING AND READING	REMEDIAL STANDARDS	NUMBER/PERCENT OF STUDENTS BELOW REMEDIAL STANDARDS		
WRITING SAMPLE	4 OF 8			
ANALYTIC SCORING INFORMATION**				
FOCUS				
ORGANIZATION				
SUPPORT/ELABORATION				
MECHANICS				
SENTENCE FORMATION				
DEGREES OF READING POWER (DRP)®	41 DRP UNITS			

*INDICATES A SCORE BELOW THE REMEDIAL STANDARD. THIS STUDENT MUST RECEIVE FURTHER DIAGNOSIS.
**ANALYTIC SCORING INFORMATION IS GIVEN ONLY FOR THOSE STUDENTS WHO SCORED BELOW THE REMEDIAL STANDARD.
1 = NEEDS REMEDIAL ASSISTANCE 2 = BORDERLINE PERFORMANCE 3 = SATISFACTORY PERFORMANCE

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CONNECTICUT MASTERY TESTING PROGRAM

SCHOOL BY CLASS REPORT

LANGUAGE ARTS

GRADE 4 FORM B

PAGE

TESTING DATE:

SCORES INDICATE NUMBER/PERCENT OF STUDENTS MASTERING EACH OBJECTIVE

										SCHOOL	DISTRICT
NUMBER OF STUDENTS TESTED											
LANGUAGE ARTS OBJECTIVES TESTED	MASTERY CRITERIA	# / %	# / %	# / %	# / %	# / %	# / %	# / %	# / %	# / %	# / %
WRITING MECHANICS											
1. CAPITALIZATION & PUNCTUATION	9 OF 12										
2. SPELLING (WORDS, HOMONYMS, AND ABBREVIATIONS)	7 OF 9										
3. AGREEMENT (VERB TENSE, SUBJECT/VERB, AND PRONOUN REFERENT)	11 OF 15										
4. LOCATING INFORMATION (SCHEDULES, MAPS, TABLE OF CONTENTS & TITLE PAGE, AND DICTIONARY)	8 OF 11										
LISTENING COMPREHENSION											
5. LITERAL	5 OF 7										
6. INFERENTIAL & EVALUATIVE	9 OF 13										
READING COMPREHENSION											
7. LITERAL	9 OF 12										
8. INFERENTIAL	10 OF 14										
9. EVALUATIVE	7 OF 10										
HOLISTIC MEASURES OF WRITING AND READING										# / % OF STUDENTS AT STATED LEVEL	
WRITING SAMPLE NUMBER/PERCENT PRODUCING MATERIAL THAT IS:	HOLISTIC SCORE	# / %	# / %	# / %	# / %	# / %	# / %	# / %	# / %	# / %	# / %
WELL WRITTEN WITH DEVELOPED SUPPORTIVE DETAIL	7 OR 8										
GENERALLY WELL ORGANIZED WITH SUPPORTIVE DETAIL	5 OR 6										
MINIMALLY PROFICIENT	4										
BELOW THE REMEDIAL STANDARD*	2 OR 3										
DEGREES OF READING POWER(DRP) ® NUMBER/PERCENT OF STUDENTS:	DRP UNIT SCORE	# / %	# / %	# / %	# / %	# / %	# / %	# / %	# / %	# / %	# / %
AT OR ABOVE THE READING GOAL FOR BEGINNING FOURTH GRADERS	50 +										
BELOW THE READING GOAL FOR BEGINNING FOURTH GRADERS BUT ABOVE THE REMEDIAL STANDARD	41 TO 49										
BELOW THE REMEDIAL STANDARD**	BELOW 41										
AVERAGE SCORES											
AVERAGE NUMBER OF OBJECTIVES MASTERED IN LANGUAGE ARTS											
AVERAGE HOLISTIC WRITING SCORE											
AVERAGE DRP UNIT SCORE											

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*REMEDIAL STANDARD IS 4 FOR WRITING.
**REMEDIAL STANDARD IS 41 DRP UNITS FOR READING

CONNECTICUT MASTERY TESTING PROGRAM

DISTRICT BY SCHOOL REPORT

LANGUAGE ARTS

GRADE 4 FORM B

PAGE

TESTING DATE:

SCORES INDICATE NUMBER/PERCENT OF STUDENTS MASTERING EACH OBJECTIVE

NUMBER OF STUDENTS TESTED										DISTRICT	
LANGUAGE ARTS OBJECTIVES TESTED	MASTERY CRITERIA	# / %	# / %	# / %	# / %	# / %	# / %	# / %	# / %	# / %	
WRITING MECHANICS											
1. CAPITALIZATION & PUNCTUATION	9 OF 12										
2. SPELLING (WORDS, HOMONYMS, AND ABBREVIATIONS)	7 OF 9										
3. AGREEMENT (VERB TENSE, SUBJECT/VERB, AND PRONOUN REFERENT)	11 OF 15										
4. LOCATING INFORMATION (SCHEDULES, MAPS, TABLE OF CONTENTS & TITLE PAGE, AND DICTIONARY)	8 OF 11										
LISTENING COMPREHENSION											
5. LITERAL	5 OF 7										
6. INFERENTIAL & EVALUATIVE	9 OF 13										
READING COMPREHENSION											
7. LITERAL	9 OF 12										
8. INFERENTIAL	10 OF 14										
9. EVALUATIVE	7 OF 10										

HOLISTIC MEASURES OF WRITING AND READING										# / % OF STUDENTS AT STATED LEVEL	
WRITING SAMPLE NUMBER/PERCENT PRODUCING MATERIAL THAT IS:	HOLISTIC SCORE	# / %	# / %	# / %	# / %	# / %	# / %	# / %	# / %	# / %	
WELL WRITTEN WITH DEVELOPED SUPPORTIVE DETAIL	7 OR 8										
GENERALLY WELL ORGANIZED WITH SUPPORTIVE DETAIL	5 OR 6										
MINIMALLY PROFICIENT	4										
BELOW THE REMEDIAL STANDARD*	2 OR 3										
DEGREES OF READING POWER(DRP) ® NUMBER/PERCENT OF STUDENTS:	DRP UNIT SCORE	# / %	# / %	# / %	# / %	# / %	# / %	# / %	# / %	# / %	
AT OR ABOVE THE READING GOAL FOR BEGINNING FOURTH GRADERS	50 +										
BELOW THE READING GOAL FOR BEGINNING FOURTH GRADERS BUT ABOVE THE REMEDIAL STANDARD	41 TO 49										
BELOW THE REMEDIAL STANDARD**	BELOW 41										

AVERAGE SCORES											
AVERAGE NUMBER OF OBJECTIVES MASTERED IN LANGUAGE ARTS											
AVERAGE HOLISTIC WRITING SCORE											
AVERAGE DRP UNIT SCORE											

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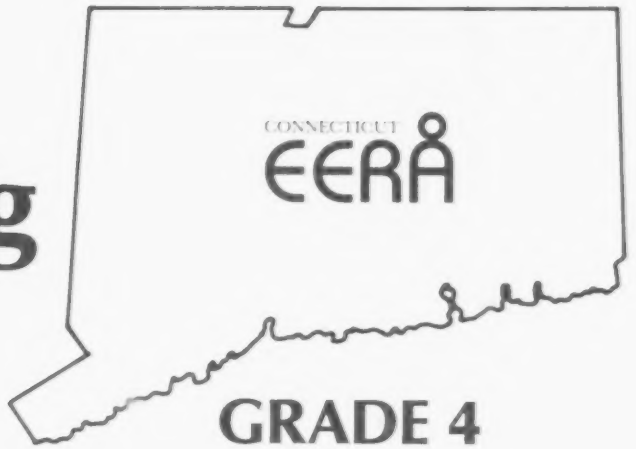
**REMEDIAL STANDARD IS 41 DRP UNITS FOR READING

Connecticut Mastery Testing Program



GRADE 4

PARENT/STUDENT DIAGNOSTIC REPORT

Your child's scores on the Connecticut Mastery Test are reported inside.

For a description of the Connecticut Mastery Testing Program, see the back cover of this folder.

For general information about your local district's testing program, please contact your superintendent of schools.

For further information on the Connecticut Mastery Testing Program, contact: Connecticut State Department of Education, Office of Research and Evaluation, Box 2219, Hartford, Connecticut 06145, (203) 566-4001 or 4008

MATHEMATICS

STUDENT OBJECTIVES ANALYSIS FOR

GRADE SCHOOL

FORM DISTRICT

TEACHER TESTING DATE

CONNECTICUT MASTERY TESTING PROGRAM

THE PSYCHOLOGICAL CORPORATION
HARCOURT BRACE JOVANOVICH, PUBLISHERS

GRADE 4 REPORT PART 1

OBJECTIVES TESTED	MASTERY CRITERIA NUMBER OF ITEMS CORRECT	STUDENT SCORE
CONCEPTUAL UNDERSTANDINGS		
1. Identify the number one more, one less, ten more or ten less than a given number	3 of 4	
2. Extend patterns involving numbers and attributes	3 of 4	
3. Order whole numbers	3 of 4	
4. Rewrite numbers using expanded notation	3 of 4	
5. Rewrite numbers by regrouping tens and ones	3 of 4	
6. Identify fractional parts of regions and sets from pictures for halves, thirds, fourths and sixths	3 of 4	
7. Relate multiplication and division facts to rectangular arrays	3 of 4	
COMPUTATIONAL SKILLS		
8. Know addition and subtraction facts to 18	3 of 4	
9. Add and subtract one and two digit numbers without regrouping	3 of 4	
10. Add one and two digit numbers with regrouping	3 of 4	
11. Estimate sums and differences to 100	3 of 4	
12. Multiply and divide by 2, 5, and 10	3 of 4	
PROBLEM SOLVING/APPLICATIONS		
13. Identify objects or numbers that do or do not belong in a collection, matrix or array	3 of 4	
14. Read and interpret bar graphs and pictographs	3 of 4	
15. Read and interpret data from tables and charts	3 of 4	
16. Identify or write number sentences from pictures	3 of 4	
17. Identify number sentences from addition or subtraction story problems	3 of 4	
18. Solve simple story problems involving addition or subtraction	3 of 4	
19. Solve and identify number sentences in simple story problems, involving addition and subtraction, with extraneous information	3 of 4	
20. Identify needed information in problem situations	3 of 4	
MEASUREMENT/GEOMETRY		
21. Measure length and identify appropriate units for measuring length and distance	3 of 4	
22. Estimate lengths and areas	3 of 4	
23. Tell time to the nearest hour, half hour and quarter hour using analog and digital clocks	3 of 4	
24. Determine the value of a set of coins	3 of 4	
25. Identify shapes, angles and sides	3 of 4	

TOTAL NUMBER OF OBJECTIVES MASTERED (out of 25)	
NUMBER OF ITEMS CORRECT (out of 100) (Remedial Standard is 69 of 100 items correct)	

LANGUAGE ARTS

STUDENT OBJECTIVES ANALYSIS FOR

GRADE: SCHOOL:

FORM: DISTRICT

TEACHER: TESTING DATE:

CONNECTICUT MASTERY TESTING PROGRAM

THE PSYCHOLOGICAL CORPORATION
HARCOURT BRACE JOVANOVICH, PUBLISHERS

GRADE 4 REPORT PART 2

OBJECTIVES TESTED	MASTERY CRITERIA NUMBER OF ITEMS CORRECT	STUDENT SCORE
WRITING MECHANICS		
1. Capitalization and Punctuation	9 of 12	
2. Spelling (words, homonyms, and abbreviations)	7 of 9	
3. Agreement (verb tense, subject-verb, and pronoun referents)	11 of 15	
LOCATING INFORMATION		
4. Schedules, Maps, Table of Contents, Title Page, and Dictionary	8 of 11	
LISTENING COMPREHENSION		
5. Literal (understands the meanings of ideas clearly stated by a speaker)	5 of 7	
6. Inferential and Evaluative (understands the meanings of ideas not clearly stated, but implied, by a speaker and is able to make critical judgments about them)	9 of 13	
READING COMPREHENSION		
7. Literal (understands the meanings of ideas clearly stated within a passage)	9 of 12	
8. Inferential (understands the meanings of ideas not stated, but implied, within a passage)	10 of 14	
9. Evaluative (able to make critical judgments about statements and inferences within a passage)	7 of 10	
TOTAL NUMBER OF OBJECTIVES MASTERED (out of 9)		

WRITING SAMPLE	STUDENT SCORE
Holistic Writing Score	
Remedial Standard is 4 of 8	

DEGREES OF READING POWER (DRP)™	STUDENT SCORE
DRP Units	
Remedial Standard is 41 DRP Units Reading Goal is 50 DRP Units	

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PARENT/STUDENT DIAGNOSTIC REPORT

Dear Parent:

Inside you will find the results of the Connecticut Mastery Test administered to your child earlier this fall. The test results help to show you and the school district's professional staff how well your child is performing on those skills identified by the State of Connecticut as important for students entering fourth grade to have mastered.

These tests are designed to determine the specific skill levels of students. The test results will be used to:

— provide your school with information for use in assessing the progress of individual students over time;
— provide your school with information based on which improvements in the general instructional program can be made; and
— provide information on appropriate basic skills remedial assistance for students so indicated.

Mastery testing will occur each fall in grades four, six, and eight.

If you have any questions about these test results please ask your child's teacher(s). The teacher(s) will share with you other observations and recommendations based on experience in working with your son or daughter during the last several months.

Description of the Test

Mathematics: The mathematics test assesses twenty-five (25) specific objectives in four general areas of: (1) Conceptual Understandings; (2) Computational Skills; (3) Problem Solving/Applications; and (4) Measurement/Geometry. Test items evaluate a student's ability to order and rename numbers; compute and estimate sums and differences; read and interpret tables, graphs, and charts; solve a broad range of problems; measure and estimate length and width; identify shapes; and tell time.

Language Arts: The language arts test covers two general areas: Reading/Listening Comprehension and Writing/Locating Information. There are nine (9) objectives and two holistic measures of reading and writing.

The content of Reading/Listening Comprehension consists of narrative, expository, and persuasive passages on a variety of topics measuring a student's reading and listening ability in: (1) Literal Comprehension; (2) Inferential or Interpretive Comprehension; and (3) Evaluative or Critical Comprehension. Audio tapes are used to assess a student's listening comprehension ability. Also used is the "Degrees of Reading Power" (DRP) Test which includes eight (8) passages and fifty-six (56) test items. It is designed to measure a student's ability to understand nonfiction English prose on a graduated scale of reading difficulty.

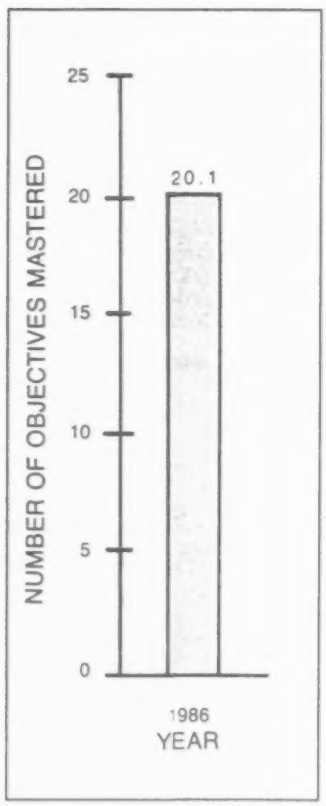
The content of Writing/Locating Information consists of three components. First, writing skills are directly assessed. A student is asked to write on a designated topic. The writing is judged on a student's demonstrated ability to convey information in a coherent and organized fashion. Second, the test assesses the mechanics of good writing, which are defined as: (1) Capitalization and Punctuation; (2) Spelling (words, homonyms, and abbreviations); and (3) Agreement. Finally, the test assesses Locating Information through the use of schedules, maps, title pages, tables of contents, and dictionaries. This part of the test measures a student's ability to find and use information from listed sources.

APPENDIX G

Number of Objectives Mastered

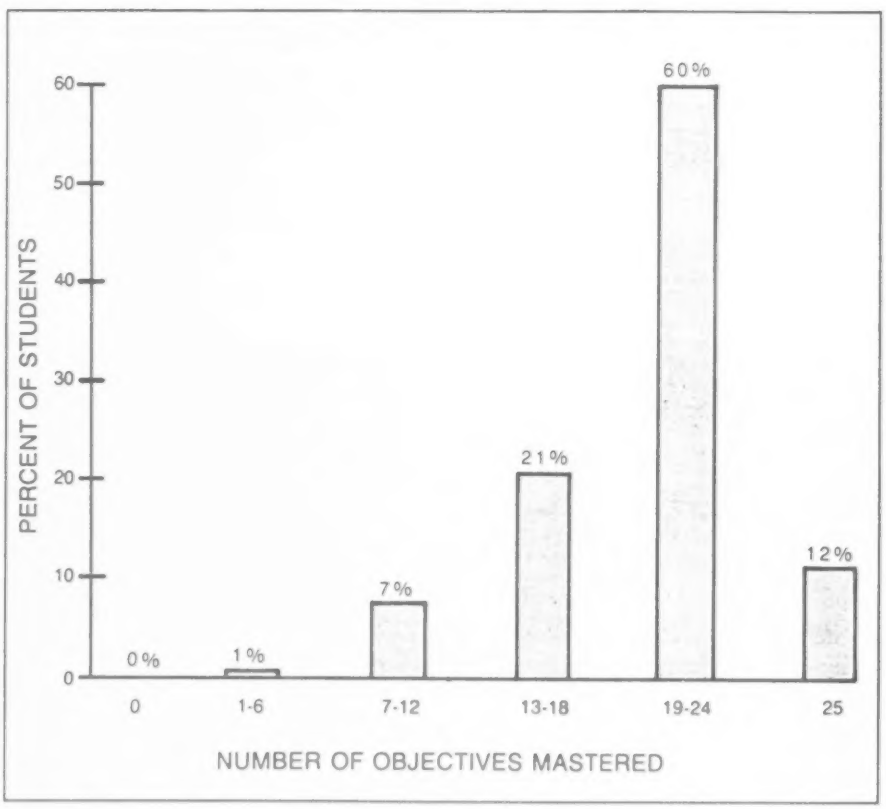
- Mathematics
- Language Arts

MATHEMATICS:
AVERAGE NUMBER OF
OBJECTIVES MASTERED



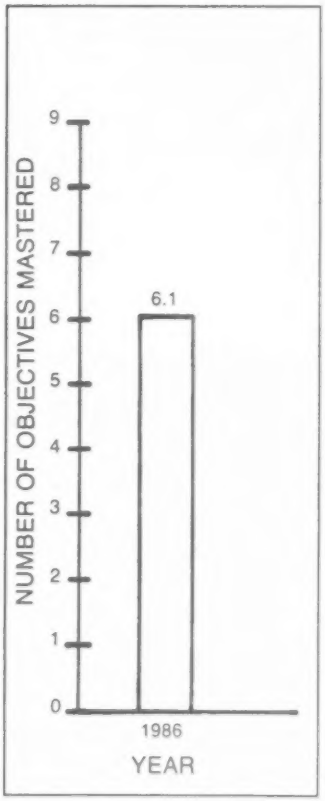
This bar chart illustrates the average number of mathematics objectives mastered, statewide.

MATHEMATICS:
PERCENT OF STUDENTS ACHIEVING MASTERY BY
NUMBER OF OBJECTIVES MASTERED



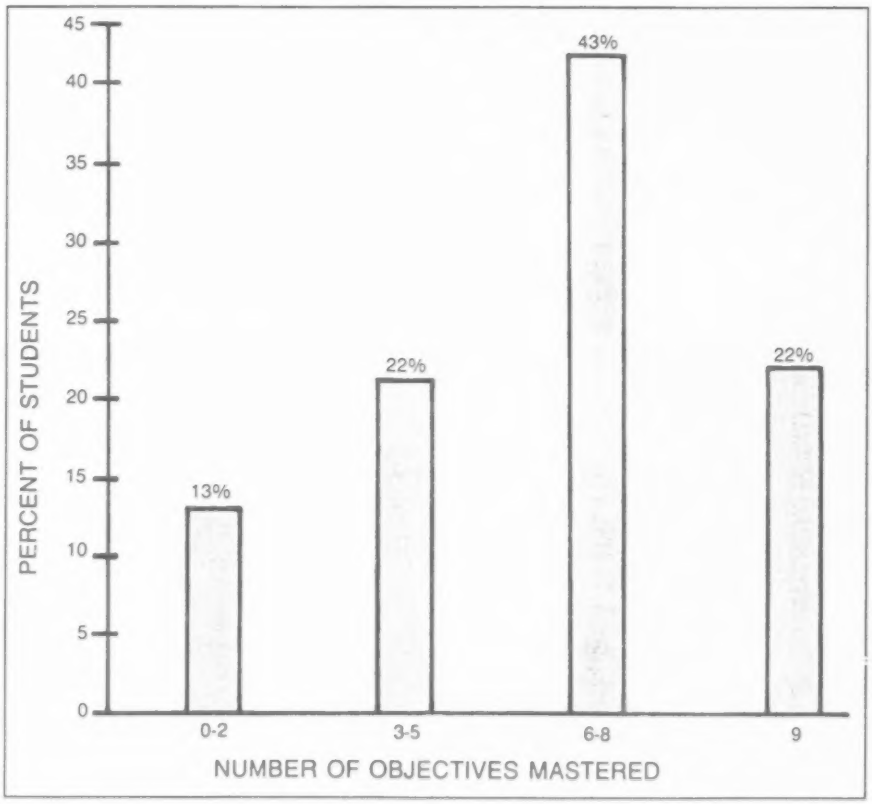
This bar chart illustrates the distribution of students, statewide, who mastered mathematics objectives within each of the six score categories.

LANGUAGE ARTS:
AVERAGE NUMBER OF
OBJECTIVES MASTERED



This bar chart illustrates the average number of *language arts objectives* mastered, statewide.

LANGUAGE ARTS:
PERCENT OF STUDENTS ACHIEVING MASTERY BY
NUMBER OF OBJECTIVES MASTERED



This bar chart illustrates the distribution of students, statewide, who mastered objectives within each of the four score groupings.

Appendix H

State by District Report - October 1986

Grade Four Mathematics Test Results

STATE BY DISTRICT REPORT
GRADE 4

CONNECTICUT MASTERY TESTING PROGRAM — MATHEMATICS

DATE TESTED: 10-86

Mastery Criteria for each objective is 3 of the 4 items correct
Remedial Standard is 69 of the 100 items correct

DISTRICT	# OF STUDENTS TESTED	TOC	OBJECTIVES TESTED: CONCEPTUAL UNDERSTANDINGS — determine 1 and 10 more/less than #	extend patterns	order whole #'s	rewrite #'s w expanded notation	id fractions/ parts	relate mul/div facts to pictures	+/- facts to 18	+/- w/o regrouping	+ with regrouping	estimate sums/differences	mul/div by 2, 5, 10	id objects/#'s in array	COMPUTATIONAL SKILLS — read/interpret graphs	read interpret tables	id # sentences from pictures	solve story problems from problems	solve story problems w +/-	PROBLEM SOLVING/ APPLICATIONS — id needed info in problems	measure length/id units	estimate length/area	tell time	determine value of a set of coins	MEASUREMENT/ GEOMETRY — id shape/angles/sides	TOTAL MATHEMATICS — Average Number of Objectives Mastered	Percent of Students Needing Further Diagnosis
SCORES REPRESENT THE PERCENT OF STUDENTS MASTERING EACH OBJECTIVE																											
ANDOVER	35	4	100	71	83	97	26	89	57	100	100	80	37	77	97	86	86	57	94	66	51	74	69	80	89	97	94	19.6	29
ANSONIA	137	5	94	73	86	99	40	95	66	94	97	91	51	85	96	96	88	53	95	78	59	87	85	74	91	93	97	20.6	10
ASHFORD	46	6	98	74	76	93	37	83	43	98	96	80	39	80	83	91	93	54	89	63	65	89	87	76	89	96	98	19.7	17
AVON	144	4	99	86	90	99	51	92	74	97	99	94	63	98	94	97	91	74	97	85	76	92	85	89	98	97	100	22.2	3
BARKHAMSTED	34	6	97	91	94	97	41	91	74	97	100	100	56	97	97	100	97	85	100	79	79	97	91	82	94	100	97	22.4	0
BERLIN	136	4	98	90	90	98	40	89	78	99	99	98	54	90	92	97	96	68	96	89	77	92	85	90	92	98	98	21.9	4
BETHANY	60	4	97	80	97	100	55	88	78	100	97	88	67	90	88	95	97	63	100	90	82	97	93	82	92	93	95	22.0	7
BETHEL	232	4	95	83	87	96	42	88	66	97	97	87	49	86	91	92	88	61	91	82	64	80	81	88	92	94	99	20.7	12
BLOOMFIELD	171	2	92	75	72	98	44	91	56	97	95	69	44	76	85	89	81	63	96	78	58	84	68	82	87	95	96	19.7	19
BOLTON	54	4	100	87	85	100	61	91	61	100	98	93	70	89	98	96	98	75	98	96	79	94	87	83	98	98	94	22.3	6
BOZRAH	30	5	97	70	80	100	20	63	57	97	100	80	23	80	97	97	77	57	93	87	57	83	77	80	93	90	100	19.5	20
BRANFORD	207	4	98	77	88	98	42	94	69	99	98	91	50	88	93	98	92	65	97	78	64	85	86	77	93	96	100	21.2	7
BRIDGEPORT	1,313	1	82	64	72	92	22	85	54	96	97	86	38	77	79	84	69	44	85	57	42	68	69	71	84	90	96	18.0	28
BRISTOL	507	3	91	70	83	95	25	81	60	97	96	86	28	82	90	92	86	53	91	73	58	80	79	79	90	91	96	19.5	18
BROOKFIELD	167	4	98	76	90	99	47	87	63	93	96	86	41	74	90	97	91	59	96	81	68	92	81	78	93	93	99	20.7	10
BROOKLYN	81	6	96	83	95	99	38	95	65	98	99	93	52	90	93	99	94	58	98	83	81	93	83	86	91	94	99	21.5	6
CANAAN	7	6	100	86	86	86	14	100	86	100	100	100	29	100	86	100	86	86	86	86	86	43	71	71	86	71	86	86	20.3	14
CANTERBURY	66	6	92	68	88	97	26	98	64	95	97	91	36	97	85	95	85	65	97	74	65	91	85	74	94	94	100	20.5	12
CANTON	87	4	95	85	90	98	45	93	64	95	94	91	63	84	93	98	89	69	93	89	72	93	86	83	94	95	98	21.5	6
CHAPLIN	15	6	100	73	93	100	40	93	53	100	100	80	40	93	87	100	93	67	93	87	80	87	93	80	93	87	93	21.1	7
CHESHIRE	294	2	97	83	88	95	49	90	67	99	98	90	64	84	88	97	94	63	96	91	79	93	90	84	92	94	99	21.6	6
CHESTER	27	6	100	81	93	100	37	78	56	93	100	85	44	81	100	93	93	78	96	89	67	89	89	85	93	100	96	21.1	0
CLINTON	148	5	97	78	84	98	49	79	62	99	95	86	39	79	93	98	90	61	95	80	69	89	85	82	94	97	100	20.8	10
COLCHESTER	105	5	96	64	81	97	36	88	60	96	95	90	32	76	79	96	90	59	90	71	61	90	83	81	94	91	97	20.0	11
COLEBROOK	16	6	100	94	100	100	75	100	75	100	94	88	56	94	94	100	94	81	100	88	75	100	94	94	94	94	100	22.8	6
COLUMBIA	45	5	93	82	93	100	41	91	55	93	100	91	32	86	89	96	91	56	93	89	71	89	89	86	96	98	100	21.0	11
CORNWALL	14	6	100	100	100	100	86	100	100	100	100	100	100	100	93	100	100	100	100	100	100	100	100	100	100	100	100	24.8	0
COVENTRY	104	4	93	82	95	100	52	95	70	99	99	90	65	84	95	95	91	73	98	91	82	96	86	82	96	96	99	22.1	6

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STATE BY DISTRICT REPORT
GRADE 4

CONNECTICUT MASTERY TESTING PROGRAM

MATHEMATICS

DATE TESTED: 10-86

Mastery Criteria for each objective is 3 of the 4 items correct
Remedial Standard is 69 of the 100 items correct

DISTRICT	# OF STUDENTS TESTED	TOC	OBJECTIVES TESTED: CONCEPTUAL UNDERSTANDINGS — determine 1 and 10 more/less than #	extend patterns	order whole #'s	rewrite #'s w expanded notation	id fractional parts	COMPUTATIONAL SKILLS — relate multiplication facts to pictures	+/- facts to 18	+/- w/o regrouping	+ with regrouping	estimate sums/differences	PROBLEM SOLVING/ APPLICATIONS — multiply by 2, 5, 10	id objects/#'s in array	read/interpret graphs	read, interpret tables	id # sentences from pictures	solve story problems from pictures	solve story problems w +/-	id needed info in problems	measure length/id units	estimate length/areas	tell time	determine value of a set of coins	MEASUREMENT/ GEOMETRY — id shapes/angles/sides	TOTAL MATHEMATICS — Average Number of Objectives Mastered	Percent of Students Needing Further Diagnosis
CROMWELL	94	4	95	81	93	98	54	98	77	100	99	94	81	86	95	97	95	67	99	87	74	90	81	83	95	97	98	22.1	4
DANBURY	567	3	92	69	80	96	36	82	66	98	98	88	56	80	87	91	83	59	89	73	60	80	81	81	90	92	96	20.0	17
DARIEN	159	2	99	93	96	99	60	89	65	95	96	97	65	94	96	97	94	74	98	88	85	94	89	86	97	92	97	22.4	4
DEEP RIVER	45	6	96	91	98	98	49	96	69	100	100	96	47	89	82	98	91	62	98	82	67	82	82	87	98	96	100	21.5	4
DERBY	82	5	90	66	80	93	17	88	57	94	98	89	24	67	79	80	79	43	88	71	52	82	70	74	88	91	99	18.6	22
EASTFORD	16	6	100	81	75	94	25	88	56	100	100	81	25	94	94	94	75	56	81	88	63	88	88	75	94	88	94	19.9	13
EAST GRANBY	41	4	95	80	85	100	46	93	63	100	98	88	71	73	90	95	88	66	95	90	73	88	93	78	98	98	98	21.4	10
EAST HADDAM	76	5	96	86	91	97	39	95	61	99	93	86	66	88	95	89	91	62	92	79	64	91	88	71	92	91	100	21.0	12
EAST HAMPTON	133	5	95	87	88	98	41	93	62	97	97	92	50	87	90	98	89	70	97	82	73	89	80	83	91	90	95	21.2	9
EAST HARTFORD	420	2	93	72	81	95	31	81	53	98	95	79	42	78	86	88	83	47	88	66	52	73	72	76	89	89	97	19.0	22
EAST HAVEN	197	2	95	77	86	97	34	86	59	97	97	87	52	83	93	94	87	61	95	86	63	85	82	78	93	92	97	20.6	9
EAST LYME	152	4	99	85	82	97	51	93	63	96	96	86	57	83	91	98	92	72	97	87	77	88	87	85	96	95	99	21.5	10
EASTON	61	4	100	85	97	97	70	89	77	98	97	95	72	85	95	98	97	79	97	87	79	93	90	93	97	100	98	22.7	3
EAST WINDSOR	77	4	94	83	88	96	35	90	68	96	96	87	40	90	96	97	95	70	95	86	74	90	82	81	97	96	96	21.2	8
ELLINGTON	119	4	97	75	90	98	47	87	68	96	97	85	71	83	94	97	94	71	98	87	69	91	94	84	92	99	98	21.6	8
ENFIELD	395	3	97	80	84	97	42	94	62	98	97	91	49	83	90	92	89	62	92	84	63	84	82	82	94	96	97	20.8	10
ESSEX	46	6	100	85	98	100	54	72	61	93	98	100	61	93	91	100	89	57	96	85	72	85	89	87	96	93	98	21.5	9
FAIRFIELD	411	2	99	84	90	98	45	88	68	99	99	93	46	90	92	96	93	63	94	87	76	90	90	87	95	94	98	21.5	6
FARMINGTON	180	4	99	92	93	100	65	94	77	99	98	92	72	94	94	97	93	74	96	94	82	93	86	88	96	96	98	22.7	4
FRANKLIN	22	5	91	73	86	100	41	68	64	100	100	95	50	68	95	86	82	68	95	82	68	86	86	91	100	91	100	20.7	14
GLASTONBURY	296	4	94	79	93	98	56	91	66	97	99	89	55	86	90	95	93	71	97	89	79	93	89	83	95	96	99	21.7	6
GRANBY	114	4	96	86	88	98	44	88	59	97	96	95	41	86	94	96	93	70	98	86	71	96	87	87	95	96	97	21.4	4
GREENWICH	431	2	97	81	88	97	45	84	63	98	97	93	55	83	93	93	89	63	94	82	69	88	80	85	92	93	98	21.0	13
GRISWOLD	116	4	88	60	86	97	24	71	53	98	97	93	33	81	89	85	83	48	94	76	48	73	74	71	91	91	97	19.0	22
GROTON	441	3	91	71	83	96	31	78	56	97	97	82	43	77	86	94	83	51	90	73	63	80	77	78	90	89	97	19.5	18
GUILFORD	247	4	94	81	83	97	38	85	62	97	98	94	36	83	92	92	88	61	94	85	68	91	86	82	87	93	97	20.7	8
HAMDEN	381	2	93	77	83	97	40	91	64	97	93	88	46	82	87	90	85	61	92	79	67	85	84	82	91	93	96	20.4	11
HAMPTON	15	5	100	80	87	100	27	80	47	100	100	87	27	80	100	100	93	60	100	80	93	100	87	93	80	93	100	20.9	0

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CONNECTICUT MASTERY TESTING PROGRAM

STATE BY DISTRICT REPORT
GRADE 4

MATHEMATICS

DATE TESTED: 10-86

Mastery Criteria for each objective is
3 of the 4 items correct
Remedial Standard is 69
of the 100 items correct

DISTRICT	# OF STUDENTS TESTED	TOC	OBJECTIVES TESTED — SCORES REPRESENT THE PERCENT OF STUDENTS MASTERING EACH OBJECTIVE																															TOTAL MATHEMATICS: Average Number of Objectives Mastered	TOTAL MATHEMATICS: Percent of Students Needing Further Diagnosis
			CONCEPTUAL UNDERSTANDINGS																						COMPUTATIONAL SKILLS												
			determine 1 and 10 more/less than #		extend patterns		order whole #'s		rewrite #'s w expanded notation		id fractional parts		relate mul/div facts to pictures		+/- facts to 18		+/- w/o regrouping		* with regrouping		estimate sums/differences		mul/div by 2, 5, 10		id objects/#'s in array		read/interpret graphs		read interpret tables		id # sentences from pictures		solve story problems from problems		solve story problems w +/-		id needed info in problems	
HARTFORD	1,646	1	70	51	52	88	13	66	48	96	95	80	24	65	72	62	59	35	78	50	31	54	54	62	74	88	92	15.6	47
HARTLAND	17	6	100	53	88	100	35	94	59	100	94	94	59	71	94	88	88	100	88	94	76	88	65	94	94	94	100	21.1	0
HEBRON	83	5	99	83	87	96	37	94	62	96	100	94	41	89	94	96	92	66	93	82	76	93	84	79	90	94	100	21.2	7
KENT	36	6	89	75	75	94	33	81	56	97	100	94	25	67	89	86	78	56	94	81	56	92	81	75	83	92	94	19.4	19
KILLINGLY	172	6	91	75	85	98	28	87	61	98	98	85	44	79	89	96	86	54	87	66	50	80	87	78	91	91	95	19.8	16
LEBANON	59	6	95	76	83	98	39	81	49	97	95	85	46	68	95	92	95	63	97	88	66	90	83	83	93	98	98	20.5	12
LEDYARD	201	4	97	80	87	95	45	88	63	98	94	85	57	85	91	95	91	66	95	81	75	89	86	85	96	90	96	21.0	7
LISBON	44	4	98	68	84	98	30	59	50	95	93	80	34	64	86	95	95	36	89	70	66	86	77	73	86	98	93	19.0	16
LITCHFIELD	74	6	96	72	85	100	47	92	47	95	95	88	50	74	88	89	92	64	91	78	72	86	85	81	93	96	93	20.5	14
MADISON	187	5	98	89	95	98	52	90	61	98	98	95	63	95	95	98	95	68	96	91	82	93	89	83	97	98	99	22.2	4
MANCHESTER	460	3	96	86	82	97	57	90	65	97	94	73	38	75	92	93	89	65	92	80	65	84	81	84	93	95	98	20.6	10
MANSFIELD	114	6	96	73	90	97	43	85	65	98	97	79	54	87	85	94	87	68	96	88	65	88	87	88	94	92	98	20.9	11
MARLBOROUGH	68	5	94	75	85	97	53	87	63	97	97	91	53	79	88	99	87	71	97	88	75	93	87	84	99	96	99	21.3	10
MERIDEN	502	3	95	80	85	96	48	89	63	95	95	83	50	76	89	93	83	59	89	74	66	83	84	77	89	93	98	20.3	15
MIDDLETOWN	297	3	89	65	84	93	28	86	50	93	95	80	35	72	81	87	80	57	90	63	54	77	72	76	87	90	97	18.8	24
MILFORD	431	3	95	86	84	98	41	89	65	99	98	90	53	83	94	94	89	62	95	78	70	84	85	82	96	97	99	21.1	8
MONROE	254	4	97	82	88	98	42	90	63	99	99	93	72	78	89	95	91	61	96	88	68	89	83	85	95	94	98	21.4	8
MONTVILLE	224	4	97	83	87	97	36	89	68	100	98	95	49	81	95	95	87	64	89	77	59	82	83	80	91	93	97	20.7	11
NAUGATUCK	286	2	93	77	76	97	39	76	59	99	95	91	37	70	88	87	76	57	91	72	62	81	68	80	90	92	96	19.5	20
NEW BRITAIN	427	3	87	68	78	94	31	77	52	96	94	87	28	72	85	85	71	54	85	64	47	72	68	73	81	91	94	18.3	27
NEW CANAAN	189	2	97	89	93	99	48	90	73	98	98	94	64	93	95	98	94	75	98	88	78	94	94	84	97	96	97	22.3	2
NEW FAIRFIELD	164	4	99	82	84	99	46	87	61	98	97	87	45	82	90	93	90	62	96	88	74	89	84	89	96	98	96	21.1	9
NEW HARTFORD	69	5	99	86	90	100	42	91	64	99	99	93	62	78	94	100	97	70	96	93	81	93	86	88	99	97	100	21.9	3
NEW HAVEN	1,117	1	80	52	71	90	29	69	51	94	93	78	28	65	76	71	66	44	82	61	41	63	67	68	78	90	92	17.0	38
NEWINGTON	231	2	98	90	92	98	47	94	69	99	97	90	55	87	94	97	90	64	93	80	71	84	84	88	97	90	100	21.5	7
NEW LONDON	218	3	84	56	68	93	24	71	58	98	99	85	25	81	80	83	75	45	86	59	49	65	70	76	80	91	95	17.9	30
NEW MILFORD	296	5	97	79	87	99	33	81	64	98	96	87	51	79	91	96	91	55	95	85	74	89	87	84	94	95	96	20.8	9
NEWTOWN	238	5	96	87	93	98	56	90	67	98	96	95	49	89	91	96	94	70	97	87	75	92	88	86	95	96	97	21.8	5

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CONNECTICUT MASTERY TESTING PROGRAM

STATE BY DISTRICT REPORT
GRADE 4

MATHEMATICS

DATE TESTED: 10-86

Mastery Criteria for each objective is
3 of the 4 items correct
Remedial Standard is 69
of the 100 items correct

OBJECTIVES TESTED

CONCEPTUAL UNDERSTANDINGS					COMPUTATIONAL SKILLS				PROBLEM SOLVING/ APPLICATIONS							MEASUREMENT/ GEOMETRY					TOTAL MATHEMATICS		
determine 1 and 10 more/less than #	extend patterns	order whole #'s	rewrite #'s w expanded notation	id fractional parts	relate multidiv facts to pictures	+/- facts to 18	+/- w/o regrouping	+ with regrouping	estimate sums/differences	multidiv by 2, 5, 10	id objects/#'s in array	read/interpret graphs	read interpret tables	id # sentences from pictures	solve story problems	solve story problems w +/-	id needed info in problems	measure length/id units	estimate length/areas	tell time	determine value of a set of coins	id shapes/angles/sides	Average Number of Objectives Mastered	Percent of Students Needing Further Diagnosis

DISTRICT	# OF STUDENTS TESTED	TOC	SCORES REPRESENT THE PERCENT OF STUDENTS MASTERING EACH OBJECTIVE																								
NORFOLK	15	6	93	80	67	100	27	93	53	100	93	80	47	80	87	93	87	53	93	73	67	87	73	73	100	100	93	19.9	13
NORTH BRANFORD	158	4	97	72	84	95	35	81	59	97	96	80	56	73	89	92	89	61	93	85	65	87	84	83	91	94	97	20.4	12
NORTH CANAAN	30	6	87	80	73	100	37	70	47	97	93	87	60	80	80	93	73	53	83	63	57	80	60	70	77	80	100	18.8	33
NORTH HAVEN	199	2	97	76	90	98	53	85	63	94	97	94	41	81	90	94	94	62	97	83	75	91	77	85	93	92	98	21.1	9
NORTH STONINGTON	67	5	97	85	93	100	30	99	69	99	100	90	57	94	94	97	93	64	94	87	66	94	91	90	96	97	100	21.7	3
NORWALK	690	3	88	77	70	93	43	82	61	94	93	79	51	76	85	84	77	56	85	69	63	74	75	77	86	87	95	19.2	24
NORWICH	366	3	90	75	84	97	29	79	60	98	97	95	37	81	88	94	84	61	91	80	67	84	80	84	93	93	97	20.2	16
OLD SAYBROOK	93	5	95	86	84	98	42	83	60	98	98	94	62	86	92	98	94	54	97	90	74	89	84	82	94	95	95	21.2	5
ORANGE	153	2	99	84	91	99	56	89	71	98	99	95	73	94	95	95	93	74	97	91	80	91	87	88	97	97	99	22.3	5
OXFORD	107	5	93	84	80	96	28	75	73	100	96	92	29	91	90	93	87	57	94	88	67	89	84	84	88	95	95	20.5	10
PLAINFIELD	186	6	97	74	76	95	32	91	55	97	96	83	37	80	83	94	84	58	91	75	62	81	77	78	90	92	98	19.8	13
PLAINVILLE	158	4	97	75	82	97	35	82	58	99	97	89	42	72	89	94	91	60	93	85	66	87	87	84	93	95	98	20.5	9
PLYMOUTH	129	2	95	71	84	100	32	80	61	96	95	82	40	77	86	94	83	47	84	70	60	78	75	73	88	93	95	19.4	18
POMFRET	31	6	100	87	84	97	48	97	61	97	94	87	65	94	87	94	87	68	97	81	61	94	87	87	90	90	90	21.2	6
PORTLAND	91	5	98	81	92	98	55	98	66	98	99	97	62	79	96	98	97	69	97	93	82	92	95	89	98	95	97	22.2	2
PRESTON	57	4	93	74	88	100	40	89	58	100	98	100	35	91	96	96	95	67	100	88	93	100	81	89	98	100	96	21.7	0
PUTNAM	106	6	98	84	88	98	35	88	58	97	97	91	63	83	82	91	82	58	89	76	72	78	90	86	86	95	97	20.6	13
REDDING	78	5	95	85	88	97	53	79	71	97	96	91	71	94	97	95	92	64	99	79	73	90	90	85	96	96	99	21.7	5
RIDGEFIELD	224	5	99	94	95	99	72	92	80	100	99	93	79	96	96	96	96	80	98	91	88	96	88	89	95	99	100	23.1	2
ROCKY HILL	140	4	96	90	98	99	66	96	89	99	98	94	76	92	94	96	97	81	98	89	86	91	90	81	99	96	98	22.9	1
SALEM	40	5	88	70	75	93	30	80	50	98	90	75	48	75	85	97	84	55	82	71	74	82	80	75	89	92	95	19.5	24
SALISBURY	26	6	96	73	81	100	38	88	73	96	92	96	35	81	85	96	85	54	96	88	73	96	85	96	92	100	100	21.0	8
SCOTLAND	10	6	90	80	80	100	30	90	40	100	100	100	40	50	80	90	80	70	80	70	40	80	70	70	90	100	90	19.1	40
SEYMOUR	141	5	94	75	83	96	35	73	64	99	96	91	33	73	89	95	89	59	94	77	55	87	77	79	94	94	94	20.0	9
SHARON	30	6	93	83	80	93	33	63	40	93	97	90	20	57	80	90	90	70	93	87	53	80	80	83	90	83	100	19.2	20
SHELTON	322	3	96	79	84	98	40	90	66	98	97	88	41	82	89	97	89	58	94	83	65	86	82	82	91	93	97	20.7	9
SHERMAN	21	6	100	95	81	100	29	95	48	95	95	90	14	76	90	95	86	38	100	81	76	100	95	76	95	86	95	20.3	5
SIMSBURY	285	4	97	88	92	99	48	89	70	98	98	90	55	92	90	97	97	67	98	85	78	94	90	82	96	96	99	21.8	6

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CONNECTICUT MASTERY TESTING PROGRAM

STATE BY DISTRICT REPORT
GRADE 4

MATHEMATICS

DATE TESTED: 10-86

Mastery Criteria for each objective is
3 of the 4 items correct
Remedial Standard is 69
of the 100 items correct

OBJECTIVES TESTED

CONCEPTUAL UNDERSTANDINGS					COMPUTATIONAL SKILLS				PROBLEM SOLVING/ APPLICATIONS								MEASUREMENT/ GEOMETRY				TOTAL MATHEMATICS						
Determine 1 and 10 more/less than #	extend patterns	order whole #'s	rewrite #'s w expanded notation	id fractional parts	relate multiv facts to pictures	+/- facts to 18	+/- w/o regrouping	+ with regrouping	estimate sums/differences	multiply by 2, 5, 10	id objects, #'s in array	read/interpret graphs	read interpret tables	id # sentences from pictures	solve story problems from pictures	solve story problems w +/-	id needed info in problems	measure length/d units	estimate length/areas	tell time	determine value of a set of coins	id shapes/properties	Average Number of Objectives Mastered	Percent of Students Needing Further Diagnosis			

DISTRICT	# OF STUDENTS TESTED	TOC	SCORES REPRESENT THE PERCENT OF STUDENTS MASTERING EACH OBJECTIVE																									
SOMERS	87	4	93	83	91	98	36	71	68	97	95	94	39	80	92	97	90	60	95	80	69	90	85	83	91	93	99	20.7	7
SOUTHINGTON	418	3	97	78	89	97	33	82	65	98	96	90	46	85	92	95	91	60	94	83	66	88	85	82	93	97	98	20.8	10
SOUTH WINDSOR	264	2	98	81	84	98	42	88	66	98	95	91	49	81	90	96	92	61	94	84	69	86	82	83	94	95	99	21.0	9
SPRAGUE	28	4	96	57	68	100	21	82	57	96	96	79	14	79	93	86	75	39	89	71	54	79	89	82	96	93	100	18.9	21
STAFFORD	94	5	92	85	81	96	51	92	66	98	97	94	62	77	88	95	95	69	94	86	69	87	78	86	96	100	94	21.3	6
STAMFORD	778	1	84	64	71	91	28	77	52	97	95	82	30	71	82	79	70	52	83	65	51	70	68	71	84	90	96	18.0	33
STERLING	28	6	96	82	100	100	36	64	61	100	100	82	46	86	86	93	93	46	86	79	61	75	89	93	89	93	96	20.3	7
STONINGTON	132	4	93	81	86	95	51	88	64	95	98	86	62	84	86	88	79	62	90	72	71	83	80	77	89	92	95	20.5	16
STRATFORD	391	2	92	74	77	94	36	88	52	98	93	83	38	76	83	90	83	53	87	74	61	79	76	78	90	92	96	19.4	20
SUFFIELD	107	4	99	90	92	97	39	75	61	99	97	78	51	91	93	95	87	58	97	79	65	89	87	89	96	94	97	21.0	7
THOMASTON	75	4	95	68	85	95	27	87	52	97	96	85	33	59	95	95	91	53	96	80	51	79	81	83	87	91	95	19.5	17
THOMPSON	92	6	97	79	72	96	42	84	67	99	99	93	45	83	93	92	91	65	96	86	71	91	84	82	96	96	100	21.0	7
TOLLAND	149	5	97	77	87	97	36	92	58	99	96	88	43	87	90	97	95	66	96	79	72	87	86	83	97	95	97	21.0	7
TORRINGTON	284	3	98	75	78	96	43	94	58	98	96	86	48	86	85	93	91	54	95	82	67	82	81	79	93	94	98	20.5	13
TRUMBULL	326	2	96	84	90	97	41	92	59	99	97	90	66	91	94	95	91	63	92	77	65	84	89	82	94	90	97	21.2	9
UNION	9	6	78	100	89	100	33	100	67	100	100	78	67	89	89	100	100	78	89	67	78	78	89	78	89	100	100	21.3	0
VERNON	306	3	97	77	82	97	41	93	58	99	97	87	47	82	82	95	91	51	96	84	70	86	87	85	93	95	97	20.7	10
VOLUNTOWN	26	6	96	72	88	100	28	96	64	100	92	88	56	100	88	100	92	50	96	77	81	88	88	88	100	96	96	21.3	4
WALLINGFORD	379	3	96	83	88	98	35	83	59	98	98	90	52	83	92	98	92	56	97	87	67	88	88	84	93	97	97	21.0	6
WATERBURY	900	1	85	62	60	90	29	81	47	96	95	79	23	67	78	73	67	37	81	61	45	66	59	72	82	90	93	17.2	35
WATERFORD	161	4	99	82	90	99	45	94	68	99	99	93	47	84	94	96	93	65	99	87	76	92	88	87	94	99	99	21.7	5
WATERTOWN	198	2	97	84	90	100	58	93	70	98	98	93	80	89	96	98	91	74	96	82	75	89	93	78	97	97	98	22.2	3
WESTBROOK	48	6	98	90	81	98	54	83	71	98	98	94	54	94	92	92	88	56	94	77	81	92	85	77	98	100	94	21.4	6
WEST HARTFORD	466	2	96	89	92	97	57	96	68	97	97	90	64	89	95	93	92	74	94	86	78	90	88	87	94	96	97	22.0	7
WEST HAVEN	416	2	98	89	94	97	58	95	74	98	99	94	60	86	94	94	91	72	96	88	77	93	82	84	96	97	100	22.0	3
WESTON	106	5	99	92	97	99	58	94	76	99	98	92	72	94	94	97	94	77	98	92	86	92	91	88	97	92	98	22.7	3
WESTPORT	196	3	97	89	89	100	60	87	74	98	95	91	56	89	97	95	93	75	97	90	84	90	88	90	95	92	99	22.1	7
WETHERSFIELD	171	2	98	88	86	98	42	90	74	99	98	92	67	89	91	99	91	61	98	85	74	89	88	81	98	95	99	21.7	6

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CONNECTICUT MASTERY TESTING PROGRAM

STATE BY DISTRICT REPORT
GRADE 4

MATHEMATICS

DATE TESTED: 10-86

Mastery Criteria for each objective is
3 of the 4 items correct
Remedial Standard is 69
of the 100 items correct

OBJECTIVES TESTED

CONCEPTUAL UNDERSTANDINGS					COMPUTATIONAL SKILLS				PROBLEM SOLVING/ APPLICATIONS							MEASUREMENT/ GEOMETRY					TOTAL MATHEMATICS			
determine 1 and 10 more/less than #	extend patterns	order whole #'s	rewrite #'s w expanded notation	rewrite #'s by regrouping	id fractional parts	relate mult/div facts to pictures	+/- facts to 18	+/- w/o regrouping	+ with regrouping	estimate sums/differences	mult/div by 2, 5, 10	id objects/#'s in array	read/interpret graphs	read interpret tables	id # sentences from pictures	solve story problems from problems	solve story problems w +/-	id needed info in problems	measure length/id units	estimate length/areas	tell time	determine value of a set of coins	id shapes/angles/sizes	Average Number of Objectives Mastered	Percent of Students Needing Further Diagnosis

DISTRICT	# OF STUDENTS TESTED	TOC	SCORES REPRESENT THE PERCENT OF STUDENTS MASTERING EACH OBJECTIVE																										
WILLINGTON	49	5	90	88	71	94	57	88	65	94	71	71	29	59	90	84	84	69	94	63	61	78	88	78	90	92	94	19.4	18
WILTON	182	4	98	86	98	98	59	92	76	97	98	95	69	92	91	97	96	69	97	88	81	92	93	87	92	97	96	22.4	4
WINCHESTER	113	6	96	81	82	99	37	50	55	98	98	87	46	69	86	93	89	58	96	87	61	88	77	83	93	97	95	20.0	12
WINDHAM	207	6	89	75	83	95	48	88	66	93	94	76	52	74	87	82	81	59	89	70	58	76	70	77	86	91	98	19.6	19
WINDSOR	308	2	93	74	84	95	30	88	56	96	96	79	31	76	86	90	83	50	90	73	64	77	81	78	93	94	98	19.6	15
WINDSOR LOCKS	99	4	96	78	89	98	28	87	52	98	98	94	45	80	91	95	94	66	93	81	61	93	86	88	91	94	98	20.7	11
WOLCOTT	142	2	97	72	88	96	42	88	64	98	99	89	58	89	94	94	94	66	94	76	70	89	86	83	91	94	96	21.1	10
WOODBRIDGE	86	4	99	86	94	99	49	92	71	98	99	99	65	91	93	95	91	66	98	90	85	97	92	86	98	97	99	22.3	5
WOODSTOCK	58	6	93	76	81	97	43	74	52	93	95	72	34	88	81	90	83	50	93	74	69	84	81	81	93	88	100	19.7	19
REGIONAL NO. 6	44	6	98	91	86	100	45	93	68	100	98	95	41	91	95	98	89	80	98	91	82	95	93	89	95	91	100	22.0	0
REGIONAL NO. 10	173	5	98	87	91	98	54	92	62	98	97	90	45	79	90	95	91	71	94	88	74	92	81	83	96	95	99	21.4	10
REGIONAL NO. 12	71	6	99	79	94	97	39	99	66	97	100	92	63	93	92	97	90	62	96	86	70	96	93	87	94	96	100	21.8	6
REGIONAL NO. 13	89	5	97	82	81	99	43	84	61	94	96	88	35	81	88	98	93	57	97	88	78	94	82	84	91	91	93	20.7	6
REGIONAL NO. 14	94	4	97	79	80	99	33	84	61	99	98	90	47	83	85	97	94	59	98	83	73	91	90	77	95	96	97	20.8	9
REGIONAL NO. 15	191	4	96	80	83	99	37	88	65	98	98	94	57	93	93	97	94	63	96	87	69	90	79	83	92	94	98	21.2	7
REGIONAL NO. 16	120	4	93	74	81	94	23	79	62	97	97	90	45	79	91	94	92	58	91	77	65	83	90	78	91	93	99	20.1	17
REGIONAL NO. 17	146	6	98	82	92	100	51	89	64	97	96	88	51	75	88	95	90	66	95	72	66	88	88	88	92	96	98	21.1	4
REGIONAL NO. 18	100	6	93	83	87	95	44	76	61	94	96	85	50	76	86	92	87	64	92	78	69	86	86	79	94	92	99	20.4	16

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STATE BY DISTRICT REPORT
GRADE 4

CONNECTICUT MASTERY TESTING PROGRAM — MATHEMATICS

DATE TESTED: 10-86

Mastery Criteria for each objective is 3 of the 4 items correct.
Remedial Standard is 69 of the 100 items correct.

DISTRICT	# OF STUDENTS TESTED	TOC	OBJECTIVES TESTED: CONCEPTUAL UNDERSTANDINGS — determine 1 and 10 more/less than #	extend patterns	order whole #'s	rewrite #'s w expanded notation	id fractional parts	COMPUTATIONAL SKILLS — relate mult/div facts to pictures	+/- facts to 18	+/- w/o regrouping	x with regrouping	estimate sums/differences	PROBLEM SOLVING/ APPLICATIONS — mult/div by 2, 5, 10	id objects/#'s in array	read/interpret graphs	read interpret tables	id # sentences from pictures	id # sentences from problems	solve story problems	solve story problems w +/-	id needed info in problems	MEASUREMENT/ GEOMETRY — measure length/id units	estimate length/areas	tell time	determine value of a set of coins	id shapes/angles/sides	TOTAL MATHEMATICS — Average Number of Objectives Mastered	Percent of Students Needing Further Diagnosis
			SCORES REPRESENT THE PERCENT OF STUDENTS MASTERING EACH OBJECTIVE																									
TOC 1 TOTAL	5,754		79	58	64	90	23	74	50	96	95	81	29	69	77	73	65	42	81	58	40	63	63	68	80	89	94	17.0	37
TOC 2 TOTAL	6,333		96	81	87	97	44	89	64	98	97	89	53	84	91	93	89	62	93	81	69	86	83	82	93	93	98	20.9	11
TOC 3 TOTAL	7,206		93	76	82	96	38	85	61	97	96	86	44	80	88	92	85	58	91	76	63	81	80	80	90	93	97	20.1	15
TOC 4 TOTAL	5,770		96	81	88	98	44	88	66	98	97	90	54	85	92	95	92	65	96	85	71	89	86	83	94	95	98	21.3	8
TOC 5 TOTAL	3,235		96	82	88	98	45	88	65	98	97	90	51	84	91	96	91	64	95	84	73	90	85	83	94	95	97	21.2	8
TOC 6 TOTAL	2,282		95	79	85	97	40	85	60	97	97	87	48	81	88	93	87	61	93	78	66	86	83	82	92	94	97	20.5	12
STATE TOTAL	30,580		92	75	82	96	39	85	61	97	96	87	46	80	87	90	84	58	91	76	63	82	79	79	90	93	97	20.1	16

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APPENDIX I

State by District Report - October 1986

Grade Four Language Arts Test Results

STATE BY DISTRICT REPORT
GRADE 4

CONNECTICUT MASTERY TESTING PROGRAM — LANGUAGE ARTS

DATE TESTED: 10-86

			OBJECTIVES TESTED							TOTAL LANGUAGE ARTS	DEGREES OF READING POWER (DRP)		WRITING SAMPLE													
			WRITING MECHANICS			LOCATING INFORMATION		LISTENING COMPREHENSION		READING COMPREHENSION																
DISTRICT	# OF STUDENTS TESTED	TOC	capitalization & punctuation	spelling/homonyms/abbreviations	agreement	schedules, maps, table of contents, dictionary		literal	inferential and evaluative	literal	inferential	evaluative	Average Number of Objectives Mastered	Below 41	41-49	50+	Average DRP Score	% of Students Needing Further Diagnosis	2	3	4	5	6	7	8	Average Holistic Score	% of Students Needing Further Diagnosis
MASTERY CRITERIA (# CORRECT/# POSSIBLE)			9/12		7/9	11/15		8/11		5/7	9/13	9/12	10/14	7/10													
			SCORES REPRESENT THE PERCENT OF STUDENTS MASTERING EACH OBJECTIVE																								
ANDOVER	35	4	74		60	86		80		69	57	66	60	51	6.0	31	29	40	42	31	20	29	29	14	9	0	0	3.6	49
ANSONIA	137	5	91		61	89		91		50	58	72	50	34	6.0	15	42	42	47	15	13	16	38	13	14	6	1	4.2	29
ASHFORD	46	6	87		50	83		85		54	48	65	65	46	5.8	26	20	54	45	26	4	17	26	24	15	11	2	4.7	22
AVON	144	4	92		78	92		94		66	80	86	76	73	7.4	14	22	65	50	14	1	4	16	33	20	17	8	5.5	5
BARKHAMSTED	34	6	97		74	100		97		79	88	97	85	85	8.0	9	18	74	50	9	0	0	6	21	26	21	26	6.4	0
BERLIN	136	4	95		69	94		94		68	78	77	71	62	7.1	10	27	63	50	10	3	4	29	32	12	15	7	5.2	7
BETHANY	60	4	92		80	98		93		73	85	95	82	73	7.7	3	25	72	56	3	0	8	17	28	17	20	10	5.5	8
BETHEL	232	4	85		65	84		85		60	72	75	66	56	6.5	27	28	45	44	27	6	7	39	23	13	11	2	4.7	12
BLOOMFIELD	171	2	78		60	78		82		49	57	69	57	55	5.9	33	26	41	43	33	11	20	31	21	8	7	1	4.2	31
BOLTON	54	4	91		74	96		98		74	80	89	78	61	7.4	6	33	61	53	6	0	6	28	22	22	19	4	5.3	6
BOZRAH	30	5	87		73	97		100		67	67	80	63	60	6.9	23	40	37	45	23	7	17	37	20	0	10	10	4.6	23
BRANFORD	207	4	91		65	88		91		63	76	87	71	54	6.9	21	31	48	45	21	4	8	45	19	12	9	2	4.6	12
BRIDGEPORT	1,319	1	65		54	54		68		36	36	43	28	25	4.1	55	29	16	38	55	18	24	34	14	7	3	1	3.8	42
BRISTOL	507	3	87		66	83		88		52	62	71	56	46	6.1	25	29	47	45	25	6	13	32	25	12	9	3	4.6	19
BROOKFIELD	167	4	96		77	90		94		68	87	90	78	71	7.5	7	29	65	53	7	1	6	26	20	20	16	10	5.4	7
BROOKLYN	81	6	99		60	94		94		49	59	81	65	47	6.5	20	27	53	47	20	10	16	41	20	9	5	0	4.2	26
CANAAN	7	6	86		100	100		100		29	57	57	86	57	6.7	0	57	43	48	0	0	0	29	14	29	14	14	5.7	0
CANTERBURY	66	6	91		68	86		91		63	68	74	58	39	6.4	26	31	43	45	26	3	12	39	21	14	8	3	4.7	15
CANTON	87	4	94		61	94		90		67	76	86	75	59	7.0	16	29	55	48	16	6	6	29	24	13	16	7	5.1	11
CHAPLIN	15	6	100		60	80		93		73	73	87	80	67	7.1	27	27	47	47	27	7	7	20	33	20	13	0	4.9	13
CHESHIRE	294	2	91		76	92		96		61	84	86	76	76	7.4	15	23	61	49	15	3	9	18	22	18	21	9	5.4	12
CHESTER	27	6	85		48	93		85		67	63	81	78	44	6.4	15	52	33	45	15	0	30	22	19	19	11	0	4.6	30
CLINTON	148	5	90		58	88		91		66	73	80	65	57	6.7	18	29	53	48	18	9	4	33	27	12	10	4	4.8	13
COLCHESTER	105	5	90		71	91		94		61	67	79	70	60	6.8	16	32	51	47	16	6	7	28	26	23	8	4	4.9	12
COLEBROOK	16	6	94		75	100		94		56	100	94	69	69	7.5	13	31	56	49	13	13	6	25	13	25	6	13	5.0	19
COLUMBIA	45	5	96		73	98		96		56	69	73	67	51	6.8	24	22	53	47	24	14	9	35	26	9	5	2	4.3	23
CORNWALL	14	6	100		100	100		100		100	100	100	100	100	9.0	0	0	100	68	0	0	0	0	29	14	29	29	6.6	0
COVENTRY	104	4	91		66	93		91		58	79	82	71	58	6.9	13	34	53	48	13	11	10	40	19	8	10	3	4.4	20

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STATE BY DISTRICT REPORT
GRADE 4

CONNECTICUT MASTERY TESTING PROGRAM

LANGUAGE ARTS

DATE TESTED: 10-86

| | | | OBJECTIVES TESTED | | | | | | TOTAL LANGUAGE ARTS | DEGREES OF READING POWER (DRP) | | | WRITING SAMPLE | | | | | |

STATE BY DISTRICT REPORT
GRADE 4

CONNECTICUT MASTERY TESTING PROGRAM — LANGUAGE ARTS

DATE TESTED: 10-86

| | | | OBJECTIVES TESTED | | |

STATE BY DISTRICT REPORT
GRADE 4

CONNECTICUT MASTERY TESTING PROGRAM — LANGUAGE ARTS

DATE TESTED: 10-86

DISTRICT	# OF STUDENTS TESTED	TOC	Writing Mechanics: Capitalization & Punctuation	Writing Mechanics: Spelling/Homonyms/Abbreviations	Writing Mechanics: Agreement	Locating Information: Schedules, maps, table of contents, dictionary	Listening Comprehension: Literal	Listening Comprehension: Inferential and Evaluative	Reading Comprehension: Literal	Reading Comprehension: Inferential	Reading Comprehension: Evaluative	Total Language Arts: Average Number of Objectives Mastered	Degrees of Reading Power (DRP): Below 41	Degrees of Reading Power (DRP): 41-48	Degrees of Reading Power (DRP): 50+	Degrees of Reading Power (DRP): Average DRP Score	Writing Sample: % of Students Needing Further Diagnosis: 2	3	4	5	6	7	8	Writing Sample: Average Holistic Score	Writing Sample: % of Students Needing Further Diagnosis
MASTERY CRITERIA (# CORRECT/# POSSIBLE)			9/12	7/9	11/15	8/11	5/7	9/13	9/12	10/14	7/10														
			SCORES REPRESENT THE PERCENT OF STUDENTS MASTERING EACH OBJECTIVE																						
NORFOLK	15	6	87	67	80	87	60	73	87	73	40	6.5	27	20	53	44	27	14	0	29	36	7	14	0	4.6	14
NORTH BRANFORD	158	4	90	62	88	93	50	60	80	66	46	6.3	21	31	48	45	21	12	12	33	22	10	8	3	4.4	24
NORTH CANAAN	30	6	80	40	90	67	57	53	77	50	43	5.6	20	43	37	44	20	0	33	7	30	13	10	7	4.8	33
NORTH HAVEN	199	2	92	70	96	94	54	64	81	69	53	6.7	25	23	52	47	25	10	7	41	18	14	7	3	4.5	17
NORTH STONINGTON	67	5	93	84	88	97	72	73	82	84	58	7.3	13	24	63	49	13	0	3	28	28	19	10	10	5.4	3
NORWALK	692	3	71	54	73	78	45	54	61	48	47	5.3	44	24	32	41	44	11	15	28	22	13	7	4	4.5	26
NORWICH	366	3	86	60	86	90	47	62	76	61	61	6.3	26	26	48	45	26	13	19	33	17	10	6	3	4.2	32
OLD SAYBROOK	93	5	85	65	87	89	56	70	74	74	55	6.6	32	32	36	43	32	5	14	37	25	8	8	3	4.5	20
ORANGE	153	2	97	80	93	95	67	76	84	71	59	7.2	12	29	59	50	12	4	9	28	27	16	9	7	5.0	13
OXFORD	107	5	89	65	88	93	57	74	80	70	56	6.7	18	31	51	48	18	5	11	46	22	8	6	2	4.4	16
PLAINFIELD	186	6	87	62	79	83	44	53	66	51	49	5.8	34	27	39	42	34	10	19	26	21	12	10	2	4.4	29
PLAINVILLE	158	4	95	66	86	91	66	73	79	59	61	6.8	21	30	49	45	21	6	4	35	22	13	13	7	5.0	10
PLYMOUTH	130	2	82	65	88	84	57	56	73	57	43	6.1	27	35	38	44	27	6	14	43	19	11	6	1	4.4	20
POMFRET	31	6	90	68	87	94	61	77	74	74	68	6.9	19	23	58	49	19	0	3	10	24	17	17	28	6.2	3
PORTLAND	91	5	95	86	93	96	67	82	85	74	74	7.5	15	19	66	50	15	5	9	35	24	9	12	3	4.7	14
PRESTON	57	4	89	74	95	95	58	65	93	81	60	7.1	18	19	63	49	18	2	5	19	33	21	12	7	5.3	7
PUTNAM	106	6	83	55	78	84	63	69	70	59	49	6.2	31	22	47	43	31	5	6	36	28	16	9	1	4.8	11
REDDING	78	5	87	70	87	94	50	82	90	76	77	7.1	15	36	49	49	15	3	5	27	15	21	24	5	5.4	8
RIDGEFIELD	224	5	94	75	96	95	68	80	87	83	73	7.5	12	18	70	50	12	1	5	14	17	28	22	13	5.8	6
ROCKY HILL	140	4	99	75	97	95	73	81	89	71	67	7.5	13	24	63	49	13	1	4	16	36	19	17	8	5.5	4
SALEM	39	5	82	56	77	74	44	69	68	61	47	5.8	23	31	46	44	23	8	10	36	23	18	5	0	4.5	18
SALISBURY	26	6	85	35	81	92	54	69	81	69	69	6.3	12	27	62	49	12	12	23	42	15	4	0	4	3.9	35
SCOTLAND	10	6	90	50	60	70	20	50	60	50	60	5.1	40	20	40	41	40	0	30	0	20	10	30	10	5.4	30
SEYMOUR	141	5	96	72	91	94	55	75	84	72	65	7.0	13	34	52	49	13	6	7	37	22	17	9	2	4.7	13
SHARON	30	6	80	57	87	90	50	53	73	60	33	5.8	7	37	57	50	7	10	10	33	33	10	0	3	4.4	20
SHELTON	321	3	91	68	88	91	61	69	77	63	56	6.7	16	30	55	48	16	5	8	28	27	17	10	5	4.9	13
SHERMAN	21	6	86	71	95	86	81	71	81	67	48	6.9	19	33	48	47	19	0	14	57	10	5	14	0	4.5	14
SIMSBURY	283	4	97	82	95	96	71	89	92	84	81	7.9	12	19	69	53	12	2	5	21	30	15	19	8	5.4	7

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STATE BY DISTRICT REPORT
GRADE 4

CONNECTICUT MASTERY TESTING PROGRAM — LANGUAGE ARTS

DATE TESTED: 10-86

	OBJECTIVES TESTED									TOTAL LANGUAGE ARTS	DEGREES OF READING POWER (DRP)			WRITING SAMPLE											
	WRITING MECHANICS			LOCATING INFORMATION	LISTENING COMPREHENSION		READING COMPREHENSION																		
	capitalization & punctuation	spelling/homonyms/abbreviations	agreement	schedules, maps, table of contents, dictionary	literal	inferential and evaluative	literal	inferential	evaluative	Average Number of Objectives Mastered	Below 41	41-49	50+	Average DRP Score	% of Students Needing Further Diagnosis	2	3	4	5	6	7	8	Average Holistic Score	% of Students Needing Further Diagnosis	
MASTERY CRITERIA (# CORRECT/# POSSIBLE)				9/12	7/9	11/15	8/11	5/7	9/13	9/12	10/14	7/10													
DISTRICT	# OF STUDENTS TESTED	TOC	SCORES REPRESENT THE PERCENT OF STUDENTS MASTERING EACH OBJECTIVE																						
SOMERS	87	4	97	67	84	91	59	67	79	63	52	6.6	25	30	45	45	25	10	12	24	23	12	13	6	4.8	22
SOUTHINGTON	410	3	95	70	94	96	54	66	84	65	61	6.8	17	32	51	48	17	4	10	34	23	13	11	5	4.9	13
SOUTH WINDSOR	264	2	89	72	91	90	57	71	78	64	58	6.7	17	28	55	48	17	4	6	29	26	17	12	7	5.1	9
SPRAGUE	28	4	82	57	86	82	54	46	57	64	39	5.7	32	25	43	43	32	19	19	22	22	11	7	0	4.1	37
STAFFORD	94	5	90	54	93	91	55	50	81	59	45	6.2	18	33	48	47	18	2	10	33	33	15	6	1	4.7	12
STAMFORD	778	1	69	53	67	74	47	54	54	44	42	5.0	44	25	31	41	44	15	17	25	19	9	9	5	4.4	33
STERLING	28	6	86	43	86	82	57	75	75	64	39	6.1	46	18	36	42	46	11	14	29	29	7	7	4	4.4	25
STONINGTON	132	4	80	54	80	82	52	55	67	59	45	5.7	28	31	41	43	28	14	12	32	11	22	8	2	4.5	26
STRATFORD	391	2	86	63	86	88	57	60	66	55	51	6.1	25	28	47	45	25	7	13	32	21	16	8	3	4.6	20
SUFFIELD	107	4	86	52	93	87	68	77	84	72	52	6.7	17	31	52	47	17	9	11	27	30	10	12	1	4.6	20
THOMASTON	75	4	91	75	83	85	59	59	81	60	37	6.3	24	27	49	45	24	8	8	48	23	8	3	3	4.3	16
THOMPSON	92	6	80	67	90	93	63	67	77	64	51	6.5	20	27	53	47	20	7	7	43	22	11	8	2	4.6	13
TOLLAND	149	5	92	62	86	91	73	77	82	68	64	6.9	10	26	64	50	10	5	7	30	27	17	11	3	4.9	12
TORRINGTON	285	3	82	65	80	86	56	60	70	59	50	6.1	31	27	41	43	31	6	15	34	21	11	10	3	4.6	21
TRUMBULL	326	2	90	75	89	90	64	75	82	63	62	6.9	19	24	57	48	19	3	11	29	24	17	11	5	4.9	14
UNION	9	6	89	78	100	100	78	89	100	78	67	7.8	11	22	67	55	11	0	22	22	33	11	0	11	4.8	22
VERNON	305	3	92	70	92	91	57	77	78	70	66	6.9	22	27	51	47	22	5	11	33	23	17	7	4	4.7	16
VOLUNTOWN	26	6	88	50	92	92	62	81	81	69	62	6.8	27	23	50	44	27	4	8	38	31	12	8	0	4.6	12
WALLINGFORD	379	3	91	71	89	93	52	76	82	66	66	6.9	16	33	51	47	16	5	11	26	22	18	13	6	5.0	15
WATERBURY	904	1	69	40	64	71	38	41	48	32	28	4.3	43	29	28	41	43	23	24	30	14	6	3	1	3.7	47
WATERFORD	160	4	93	64	90	95	60	79	81	70	68	7.0	14	25	61	50	14	11	23	33	20	8	5	1	4.1	34
WATERTOWN	198	2	97	84	94	93	60	74	83	68	60	7.1	18	27	55	48	18	1	7	33	26	18	9	7	5.0	8
WESTBROOK	48	6	92	73	92	94	50	63	85	65	56	6.7	23	31	46	47	23	4	13	31	29	17	6	0	4.6	17
WEST HARTFORD	467	2	86	65	87	88	59	81	79	71	69	6.9	18	23	59	49	18	5	8	31	18	13	15	9	5.0	14
WEST HAVEN	416	2	93	76	88	95	56	66	82	61	56	6.7	26	27	47	47	26	4	18	36	21	10	8	3	4.5	21
WESTON	106	5	96	80	96	96	71	90	86	89	75	7.8	8	14	78	55	8	2	5	25	24	15	25	6	5.4	7
WESTPORT	196	3	88	67	92	94	66	78	85	78	62	7.1	16	23	61	49	16	4	9	22	26	21	14	5	5.1	12
WETHERSFIELD	171	2	92	70	90	95	70	75	77	72	56	7.0	18	28	54	48	18	2	8	32	22	21	10	5	5.0	10

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CONNECTICUT MASTERY TESTING PROGRAM

STATE BY DISTRICT REPORT
GRADE 4

LANGUAGE ARTS

DATE TESTED: 10-86

	OBJECTIVES TESTED									TOTAL LANGUAGE ARTS	DEGREES OF READING POWER (DRP)			WRITING SAMPLE																		
	WRITING MECHANICS			LOCATING INFORMATION		LISTENING COMPREHENSION		READING COMPREHENSION																								
	capitalization & punctuation	spelling/homonyms/abbreviations	agreement	table of contents, table of contents, dictionary		literal	inferential and evaluative	literal	inferential	evaluative	Average Number of Objectives Mastered	Below 41	41-49	50+	Average DRP Score	% of Students Needing Further Diagnosis	2	3	4	5	6	7	8	Average Holistic Score	% of Students Needing Further Diagnosis						
MASTERY CRITERIA (# CORRECT/# POSSIBLE)				9/12	7/9	11/15	8/11	5/7	9/13	9/12	10/14	7/10																				
DISTRICT	# OF STUDENTS TESTED	TOC	SCORES REPRESENT THE PERCENT OF STUDENTS MASTERING EACH OBJECTIVE																													
WILLINGTON	49	5	81	44	79	85	55	67	72	60	45	5.9	37	18	45	43	37	4	10	47	18	16	4	0	4.4	14						
WILTON	182	4	95	83	94	97	78	92	84	82	75	7.8	9	18	73	53	9	2	6	28	27	14	16	8	5.3	7						
WINCHESTER	113	6	86	50	85	88	59	70	74	52	54	6.2	36	32	32	42	36	21	13	26	21	13	4	3	4.1	34						
WINDHAM	207	6	79	55	72	78	48	57	58	43	50	5.4	41	26	33	41	41	16	17	27	17	11	9	2	4.3	33						
WINDSOR	308	2	86	55	77	84	51	67	70	60	55	6.0	29	29	43	43	29	9	11	30	24	13	10	3	4.6	20						
WINDSOR LOCKS	99	4	94	83	93	93	51	71	83	60	58	6.8	14	36	49	48	14	4	9	24	17	26	13	6	5.2	13						
WOLCOTT	142	2	93	68	93	92	57	68	80	61	61	6.7	23	35	42	45	23	2	3	32	28	17	13	5	5.1	5						
WOODBRIDGE	86	4	93	80	97	94	66	81	88	78	80	7.6	14	25	61	49	14	1	1	15	29	14	24	15	5.9	2						
WOODSTOCK	58	6	88	48	79	90	55	69	78	62	67	6.4	28	29	43	44	28	5	12	31	16	10	16	10	5.0	17						
REGIONAL NO. 6	44	6	91	66	98	98	70	75	84	80	57	7.2	5	36	59	53	5	0	7	21	35	16	21	0	5.2	7						
REGIONAL NO. 10	173	5	90	68	90	92	60	65	77	68	55	6.7	21	29	50	45	21	6	12	25	21	13	15	8	5.0	17						
REGIONAL NO. 12	71	6	93	62	93	94	63	80	83	76	82	7.3	10	24	66	50	10	0	11	18	28	18	14	10	5.4	11						
REGIONAL NO. 13	89	5	94	54	93	90	51	82	88	73	52	6.8	17	26	57	48	17	3	4	35	25	15	17	1	5.0	8						
REGIONAL NO. 14	95	4	85	67	96	96	71	80	85	74	67	7.2	20	26	54	49	20	2	11	32	26	14	10	6	4.9	13						
REGIONAL NO. 15	191	4	94	73	93	95	64	78	86	75	71	7.3	15	27	58	48	15	1	8	33	24	18	10	7	5.1	8						
REGIONAL NO. 16	120	4	92	75	88	91	63	68	78	67	52	6.7	25	28	48	44	25	7	10	38	33	11	1	0	4.4	16						
REGIONAL NO. 17	146	6	93	64	88	90	57	60	77	60	59	6.5	19	29	52	48	19	1	1	16	29	26	16	10	5.7	2						
REGIONAL NO. 18	100	6	84	60	90	91	68	71	78	70	65	6.8	22	17	61	47	22	7	14	37	18	14	6	4	4.5	21						

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STATE BY DISTRICT REPORT
GRADE 4

CONNECTICUT MASTERY TESTING PROGRAM — LANGUAGE ARTS

DATE TESTED: 10-86

| | | | OBJECTIVES TESTED | | |

APPENDIX J

Type of Community Classifications

TYPE OF COMMUNITY

TOC 1 = LARGE CITY - a town with a population of more than 100,000.

TOC 2 = FRINGE CITY - a town contiguous with a large city, and with a population over 10,000.

TOC 3 = MEDIUM CITY - a town with a population between 25,000 and 100,000 and not a Fringe City.

TOC 4 = SMALL TOWN (Suburban) - a town within an SMSA* with a population of less than 25,000, not a Fringe City.

TOC 5 = SMALL TOWN (Emerging Suburban) - a town with a population of less than 25,000 included in what was a proposed 1980 SMSA but not included in a 1970 SMSA.

TOC 6 = SMALL TOWN (Rural) - a town not included in an SMSA, with a population of less than 25,000.

*Standard Metropolitan Statistical Area

APPENDIX K

Student Participation Rates

PARTICIPATION RATES FOR FOURTH-GRADE STUDENTS BY DISTRICT
SCHOOL YEAR 1986-1987

DISTRICT	TOTAL FOURTH-GRADE POPULATION	STUDENTS ELIGIBLE FOR TESTING	PERCENT OF STUDENT POP EXEMPT FROM TESTING	PERCENT OF ELIGIBLE STUDENTS TESTED			
				MATHEMATICS	LANGUAGE ARTS	WRITING	READING
ANDOVER	34	34	0.0	100.0	100.0	100.0	100.0
ANSONIA	142	137	3.5	100.0	100.0	100.0	100.0
ASHFORD	52	46	11.5	100.0	100.0	100.0	100.0
AVON	146	144	1.4	100.0	100.0	100.0	100.0
BARKHAMSTED	38	34	10.5	100.0	100.0	100.0	100.0
BERLIN	136	122	10.3	100.0	100.0	100.0	100.0
BETHANY	62	60	3.2	100.0	100.0	100.0	100.0
BETHEL	235	232	1.3	100.0	100.0	100.0	100.0
BLOOMFIELD	176	171	2.8	99.4	100.0	100.0	100.0
BOLTON	45	42	6.7	100.0	100.0	100.0	100.0
BOZRAH	30	30	0.0	100.0	100.0	100.0	100.0
BRANFORD	207	207	0.0	98.1	97.6	98.6	100.0
BRIDGEPORT	1545	1341	13.2	97.2	95.1	91.6	97.2
BRISTOL	509	509	0.0	99.6	99.6	99.0	99.6
BROOKFIELD	169	167	1.2	100.0	100.0	100.0	100.0
BROOKLYN	85	83	2.4	97.6	97.6	97.6	97.6
CANAAN	8	7	12.5	100.0	100.0	100.0	100.0
CANTERBURY	70	67	4.3	98.5	97.0	95.5	97.0
CANTON	88	87	1.1	100.0	100.0	100.0	100.0
CHAPLIN	18	15	16.7	100.0	100.0	100.0	100.0
CHESHIRE	297	294	1.0	100.0	99.7	99.7	99.7
CHESTER	27	27	0.0	100.0	100.0	100.0	100.0
CLINTON	157	148	5.7	98.6	98.0	99.3	99.3
COLCHESTER	110	105	4.5	100.0	100.0	100.0	100.0
COLEBROOK	16	16	0.0	100.0	100.0	100.0	100.0
COLUMBIA	48	45	6.3	97.8	100.0	100.0	100.0
CORNWALL	14	14	0.0	100.0	100.0	100.0	100.0
COVENTRY	110	103	6.4	100.0	99.0	100.0	100.0
CROMWELL	103	93	9.7	100.0	100.0	100.0	100.0
DANBURY	598	573	4.2	98.4	98.4	98.4	99.0
DARIEN	176	159	9.7	100.0	98.7	99.4	99.4
DEEP RIVER	46	46	0.0	97.8	97.8	97.8	100.0
DERBY	83	82	1.2	100.0	100.0	100.0	100.0
EASTFORD	17	16	5.9	100.0	100.0	100.0	100.0
EAST GRANBY	41	41	0.0	100.0	100.0	100.0	100.0
EAST HADDAM	77	76	1.3	100.0	98.7	98.7	98.7
EAST HAMPTON	134	134	0.0	99.3	98.5	98.5	98.5
EAST HARTFORD	443	421	5.0	99.5	99.5	99.8	99.5
EAST HAVEN	206	196	4.9	100.0	100.0	99.5	100.0
EAST LYME	153	150	2.0	100.0	100.0	100.0	100.0
EASTON	64	61	4.7	100.0	100.0	100.0	100.0
EAST WINDSOR	76	74	2.6	100.0	100.0	100.0	100.0
ELLINGTON	138	119	13.8	100.0	100.0	99.2	100.0
ENFIELD	401	395	1.5	100.0	99.7	100.0	100.0
ESSEX	45	45	0.0	100.0	100.0	100.0	100.0
FAIRFIELD	433	409	5.5	100.0	100.0	100.0	100.0
FARMINGTON	193	180	6.7	100.0	100.0	100.0	100.0
FRANKLIN	22	22	0.0	100.0	100.0	100.0	100.0
GLASTONBURY	305	297	2.6	98.7	98.3	99.0	99.3
GRANBY	117	115	1.7	99.1	98.3	99.1	99.1
GREENWICH	448	437	2.5	98.2	98.6	98.2	98.6
GRISWOLD	125	116	7.2	100.0	98.3	99.1	98.3
GROTON	456	447	2.0	98.4	95.7	98.2	97.3

PARTICIPATION RATES FOR FOURTH-GRADE STUDENTS BY DISTRICT
SCHOOL YEAR 1986-1987

DISTRICT	TOTAL FOURTH-GRADE POPULATION	STUDENTS ELIGIBLE FOR TESTING	PERCENT OF STUDENT POP EXEMPT FROM TESTING	PERCENT OF ELIGIBLE STUDENTS TESTED			
				MATHEMATICS	LANGUAGE ARTS	WRITING	READING
GUILFORD	248	244	1.6	100.0	100.0	100.0	100.0
HAMDEN	381	381	0.0	100.0	100.0	100.0	100.0
HAMPTON	17	15	11.8	100.0	100.0	100.0	100.0
HARTFORD	1929	1652	14.4	99.0	95.8	97.9	96.6
HARTLAND	17	17	0.0	100.0	100.0	100.0	100.0
HEBRON	91	85	6.6	96.5	97.6	98.8	96.5
KENT	37	36	2.7	100.0	100.0	100.0	100.0
KILLINGLY	179	173	3.4	98.8	99.4	98.8	99.4
LEBANON	63	60	4.8	98.3	98.3	100.0	100.0
LEDYARD	209	200	4.3	100.0	100.0	100.0	100.0
LISBON	49	44	10.2	100.0	100.0	100.0	100.0
LITCHFIELD	76	75	1.3	98.7	98.7	98.7	98.7
MADISON	185	177	4.3	100.0	100.0	100.0	100.0
MANCHESTER	469	460	1.9	99.6	99.6	99.6	99.8
MANSFIELD	123	114	7.3	100.0	99.1	99.1	99.1
MARLBOROUGH	68	68	0.0	100.0	100.0	100.0	100.0
MERIDEN	552	503	8.9	99.2	99.2	97.0	99.6
MIDDLETOWN	303	300	1.0	99.0	98.7	99.0	99.0
MILFORD	435	435	0.0	99.1	98.4	98.6	98.9
MONROE	258	254	1.6	100.0	100.0	99.6	100.0
MONTVILLE	231	226	2.2	99.1	98.7	99.1	99.1
NAUGATUCK	317	286	9.8	100.0	99.3	99.7	99.7
NEW BRITAIN	470	427	9.1	100.0	99.5	100.0	100.0
NEW CANAAN	202	191	5.4	98.4	95.3	98.4	99.0
NEW FAIRFIELD	166	153	7.8	100.0	100.0	100.0	100.0
NEW HARTFORD	73	70	4.1	98.6	97.1	98.6	98.6
NEW HAVEN	1211	1089	10.1	100.0	100.0	100.0	100.0
NEWINGTON	234	231	1.3	100.0	100.0	100.0	100.0
NEW LONDON	234	217	7.3	100.0	100.0	100.0	100.0
NEW MILFORD	308	296	3.9	100.0	99.7	100.0	100.0
NEWTOWN	257	238	7.4	100.0	99.6	99.6	98.7
NORFOLK	15	14	6.7	100.0	100.0	100.0	100.0
NORTH BRANFORD	157	157	0.0	100.0	100.0	100.0	100.0
NORTH CANAAN	32	30	6.3	100.0	100.0	100.0	100.0
NORTH HAVEN	215	200	7.0	99.5	99.0	99.5	99.5
NORTH STONINGTON	72	68	5.6	98.5	98.5	98.5	98.5
NORWALK	712	688	3.4	100.0	99.7	100.0	100.0
NORWICH	384	368	4.2	99.5	98.9	99.2	99.5
OLD SAYBROOK	92	92	0.0	100.0	98.9	100.0	98.9
ORANGE	156	154	1.3	99.4	99.4	99.4	98.7
OXFORD	113	107	5.3	100.0	99.1	100.0	100.0
PLAINFIELD	197	186	5.6	100.0	99.5	100.0	100.0
PLAINVILLE	166	159	4.2	99.4	99.4	99.4	99.4
PLYMOUTH	137	130	5.1	99.2	99.2	100.0	100.0
POMFRET	38	31	18.4	100.0	100.0	100.0	100.0
PORTLAND	100	91	9.0	100.0	98.9	96.7	96.7
PRESTON	58	57	1.7	100.0	100.0	100.0	100.0
PUTNAM	119	107	10.1	99.1	95.3	98.1	99.1
REDDING	92	78	15.2	100.0	98.7	98.7	100.0
RIDGEFIELD	224	224	0.0	100.0	100.0	100.0	100.0
ROCKY HILL	148	139	6.1	100.0	100.0	100.0	100.0
SALEM	41	40	2.4	95.0	95.0	97.5	97.5
SALISBURY	27	26	3.7	100.0	100.0	100.0	100.0

PARTICIPATION RATES FOR FOURTH-GRADE STUDENTS BY DISTRICT
SCHOOL YEAR 1986-1987

DISTRICT	TOTAL FOURTH-GRADE POPULATION	STUDENTS ELIGIBLE FOR TESTING	PERCENT OF STUDENT POP EXEMPT FROM TESTING	PERCENT OF ELIGIBLE STUDENTS TESTED			
				MATHEMATICS	LANGUAGE ARTS	WRITING	READING
SCOTLAND	12	10	16.7	100.0	100.0	100.0	100.0
SEYMOUR	141	141	0.0	100.0	100.0	100.0	100.0
SHARON	33	30	9.1	100.0	100.0	100.0	100.0
SHELTON	345	323	6.4	99.4	98.5	99.1	99.4
SHERMAN	21	21	0.0	100.0	100.0	100.0	100.0
SIMSBURY	292	285	2.4	100.0	99.3	99.3	99.3
SOMERS	91	87	4.4	100.0	98.9	100.0	100.0
SOUTHINGTON	430	418	2.8	100.0	100.0	100.0	100.0
SOUTH WINDSOR	262	262	0.0	100.0	100.0	100.0	100.0
SPRAGUE	30	28	6.7	100.0	100.0	100.0	100.0
STAFFORD	103	94	8.7	98.9	100.0	100.0	98.9
STAMFORD	834	780	6.5	98.8	97.7	95.3	99.0
STERLING	29	28	3.4	100.0	100.0	100.0	100.0
STONINGTON	140	132	5.7	99.2	98.5	97.7	100.0
STRATFORD	404	391	3.2	100.0	99.2	99.2	100.0
SUFFIELD	107	107	0.0	100.0	100.0	100.0	100.0
THOMASTON	78	75	3.8	100.0	100.0	100.0	100.0
THOMPSON	100	91	9.0	100.0	100.0	100.0	100.0
TOLLAND	149	149	0.0	100.0	99.3	100.0	100.0
TORRINGTON	299	284	5.0	100.0	100.0	100.0	100.0
TRUMBULL	327	327	0.0	99.7	98.8	99.4	99.7
UNION	9	9	0.0	100.0	100.0	100.0	100.0
VERNON	315	305	3.2	100.0	100.0	100.0	100.0
VOLUNTOWN	27	25	7.4	100.0	100.0	100.0	100.0
WALLINGFORD	408	378	7.4	100.0	100.0	100.0	99.7
WATERBURY	957	905	5.4	98.1	97.9	99.0	99.1
WATERFORD	167	161	3.6	100.0	99.4	99.4	99.4
WATERTOWN	219	198	9.6	100.0	100.0	100.0	100.0
WESTBROOK	47	47	0.0	100.0	100.0	100.0	100.0
WEST HARTFORD	481	468	2.7	99.4	99.6	99.8	99.6
WEST HAVEN	468	417	10.9	99.5	99.3	98.8	99.3
WESTON	108	106	1.9	100.0	99.1	100.0	100.0
WESTPORT	205	196	4.4	100.0	99.5	99.5	99.0
WETHERSFIELD	182	171	6.0	100.0	99.4	100.0	100.0
WILLINGTON	50	49	2.0	100.0	95.9	100.0	100.0
WILTON	183	182	0.5	100.0	100.0	100.0	100.0
WINCHESTER	121	114	5.8	99.1	99.1	98.2	97.4
WINDHAM	226	199	11.9	100.0	100.0	100.0	100.0
WINDSOR	309	308	0.3	100.0	100.0	100.0	100.0
WINDSOR LOCKS	99	95	4.0	100.0	100.0	100.0	100.0
WOLCOTT	144	144	0.0	98.6	98.6	98.6	98.6
WOODBRIDGE	86	86	0.0	100.0	98.8	100.0	98.8
WOODSTOCK	59	58	1.7	100.0	100.0	100.0	100.0
REGION VI	52	44	15.4	100.0	100.0	65.9	100.0
REGION X	175	173	1.1	100.0	100.0	100.0	100.0
REGION XII	71	71	0.0	100.0	100.0	100.0	100.0
REGION XIII	92	89	3.3	100.0	100.0	100.0	100.0
REGION XIV	100	95	5.0	98.9	97.9	100.0	98.9
REGION XV	198	191	3.5	100.0	99.0	99.5	99.0
REGION XVI	121	120	0.8	100.0	100.0	100.0	100.0
REGION XVII	157	148	5.7	98.6	98.6	98.6	98.6
REGION XVIII	105	100	4.8	100.0	99.0	100.0	100.0

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